Lumleian Lectures

ON

CERTAIN POINTS IN THE ETIOLOGY OF DISEASE.

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LECTURE I.

IN asking the attention of my audience to certain points in the etiology of disease, I would begin by submitting that the existence of disease in general needs no further explanation than the existence of life. Disease is as natural, as physiological, as health. No living thing is immortal, and life is a constant struggle against surrounding forces, in which each individual organism succumbs after a while, by handing on its life to its successor when it has ensured the victory of the race. Pathology is only a chapter of physiology, which for convenience we have separated from the rest. We call disease that which brings us discomfort, and then look upon every disease as abnormal, obtrusive, unkindly; but if we knew it, the highest temperature of fever is as strictly in accordance with the laws of animal thermogenesis and thermolysis as the slight diurnal oscillations of health; and the excessive secretion of the kidneys in diabetes is as much a part of the system of nature as the moderate increase produced by a cold east wind in a healthy man. The processes of degeneration and decay which lead to death should be regarded as correlative with those of growth and development which follow birth. It is as natural for the old man to shrink in bulk and droop in stature, for his permanent cartilages to ossify, his hearing to grow dull and his memory weak, as for the child to grow, for his bones to set, and his mind to develop.

It has long been known that human beings are liable to be the hosts of parasitic beings less highly organised, but living, growing, and reproducing like ourselves; and in recent times we have learnt that, in addition to the diseases produced by the presence of animal parasites, another large group is due to the invasion of countless hordes of minute parasitic plants, but to regard filariæ and bacilli as merely "causes of disease" in man is to take too narrow, too human a view. Every kind of beast, and bird, and fish, and many of the lower classes, are known habitually to harbour parasites. In the majority of cases this is without injury to the host; indeed, if the parasites were invariably destructive the victory of the individual would prove destructive to the race, since, although a host can live without a parasite, the parasite cannot live without his host. The fact is that if we call "disease" whatever is abnormal, then the "pathological" condition is to be free from parasites. The bare and inhospitable state in which the most civilised of mankind keep their bodies is only maintained by ceaseless care and vigilance; as soon as these are intermitted, numberless evicted tenants resume their natural right of domicile. The immense majority of our fellow-men, in the past and in the present, have been and are the contented hosts of a dependent fauna, which finds as natural and unblamed a habitat on or in the human body as birds in the air or fishes in the sea. From the point of view of the tænia, the trichina, or the pediculus, man is in general part of its environment, and in particular its homestead and its barn, while sanitary, economical, and pathological questions, from the parasitic point of view, refer, not to the host, but to the guest.

Let us, then, for this occasion look upon diseases not as unnatural, lawless, heterogeneous, abnormal, revolutionary, but as parts of the vast order of creation. They are not to be "explained" by any single all-mastering principle of physical evil. The various ancient systems of pathology which pretended to discover a common origin of disease are all outworn, dead, or dying, as obsolete as the correlative systems of therapeutics which pretended to deal with disease as a whole by some universal antagonistic principle. Like is not cured by like, nor contraries by contraries. The true physician is not guided by fallacious general hypotheses, but by individual insight and experience, for, as the greatest of philosophers taught, *ἰατρεύει καθ' ἕκαστα*. Let us study etiology as the natural history of diseases, the circumstances in which they arise, and the complicated conditions on which they depend, as necessary, sometimes inevitable, results of the construction and the working of the bodily machine. The practical, therapeutical side of medicine is ever with us; common humanity and the peculiar interest that each separate case excites prevent any danger of our maintaining a philosophical tolerance of disease. What we are most apt to forget is its scientific side, and to this it is that I invite your attention, not to the *seats* and *nature* of diseases, but to their *causes*—or rather, I would say, their natural beginnings—the circumstances in which they occur.

It is certain that by a study of the etiology of diseases we ultimately advance the practice of our art; for rational treatment depends on diagnosis, and diagnosis rests upon pathology, and pathology in its widest sense includes not only the anatomy, but the physiology of diseases—not only their "seats," but their "causes." Moreover, if inquiry into the origin and conditions of disease helps treatment, it is indispensable for the still better art of prevention. That depends entirely upon the extent of our knowledge of etiology; and I venture to believe that more human suffering has been relieved and more lives have been saved by the studies in natural history which have taught us the origin of infectious fevers, of scurvy and lead colic, of erysipelas and pyæmia, than by the best results of pharmacology. We still keep in memory the names of Paracelsus and Glauber, the Marchioness of Chinchon, Dr. Dover, and Mr. Plummer; but who would compare these twinkling asteroids to the splendour that surrounds the names of Edward Jenner, of Pasteur, and of Lister?

I. Let us first consider whether it is possible to classify and appreciate the several causes, external or internal, which alter or modify the ordinary working of the human machine, in such a manner as to cause pain or discomfort, to incapacitate any of its ordinary functions, or to lead to a cessation of the entire mechanism. The human body, like that of all the Metazoa, is an aggregate of more or less independent living particles; not only in the ascent from the simplest to the more complex plants and animals, but also in the development of each individual, we start with the single nucleated mass of protoplasm. Each living cell, like the organism of which it forms an element, can feed, digest, and assimilate, can breathe and excrete, can be irritated, and can move. In this microcosm "nature's self untwisted lies, into its first complexities"; and, when thus unravelled, the problems of life, which we vainly thought to solve, when we understood the mechanism of circulation and secretion and movement, are seen stripped of such secondary additions, reduced to their naked simplicity, and more insoluble than ever. But if the life of a single cell be the life of the whole organism in miniature, so will be its death and the processes which lead thereto. What are the external agents which can injure or derange the ordinary functions of the cell? They may be thus stated: (1) Mechanical injuries; (2) electrical changes; (3) extremes of heat or cold; (4) chemical agents. All these, which in moderate degree act as stimuli, when more powerful become destructive. In addition, the living cell may be (*a*) starved for want of food; (*b*) stifled for want of oxygen; or (*c*) poisoned by its own excreta. If none of these accidents befall it, yet its life is limited; for, after giving birth to a new generation, the impulse which gave it being gradually weakens, until its inscrutable molecular construction and the functions which that construction make possible come together to an end. We see essentially the same disturbing forces in their action on the entire organism. Diseases may be caused by mechanical injury. To this group belong what used to be distinguished as surgical diseases, and, above all, traumatic inflammation, the reaction of the injured tissues. We may also regard as traumatic the effects of concretions, such as gall-stones and urinary calculi; their formation is a separate event to be explained on chemical grounds, the disease is not the foreign body thus formed, but the effect of its presence upon the living tissues with which it is in contact. The effects of poisons come next, but although they agree in their action being chemical, it is probable that this is their only agreement. We are at

present quite ignorant of the physiological action of hydrocyanic acid upon the ganglion cells of the bulb, of antifebrin upon those of the thermotaxic centres, and of strychnia on those of the reflex mechanism in the cord, as ignorant as when the candidate for the doctorate in Molière explained the properties of opium as due to a *virtus dormitiva cujus est natura sensus assoupire*. Nothing is positively known of electrical or magnetic changes, or of the air, the earth, or the body itself, in producing disease. May we not add that, if we except such definite effects as can be produced in the moist chamber (for example, stimulation and electrotonus), the therapeutical effects of electricity, whether statical, galvanic, or faradaic, are equally uncertain? Our knowledge of diseases caused by chemical agents is much more extensive and exact. The effects of prolonged administration, in minute doses, of metals, such as mercury, lead, arsenic, and silver, are well ascertained. The discovery of the true cause of Devonshire colic by Sir George Baker is a classical instance of etiology by inductive reasoning. Moreover, what was always a more or less probable conjecture has now been proved in certain cases to be a fact—namely, that the effects of the most numerous and destructive parasites are due to chemical poisons, which they either excrete or manufacture from the normal proteids of the body. The important paper of MM. Roux and Yersin, which appeared in the Annales de l'Institut Pasteur for 1888, proved this by direct experiment in the case of diphtheria. Of heat and cold the direct effects as we see them on the external surface are readily understood. One or two considerations, however, perhaps deserve mention here. One is the remarkable difference between the effects which the same degree of heat or cold will produce upon different skins. We have always the "irritabile" to consider as well as the "irritans." Another is the remarkable effect of habit upon living tissues as well as organisms, upon epithelium and glands as well as on the nervous system; and habit tells in two ways, by inuring tissues to bear without reaction what at first was a powerful irritant, and again in continuing the effect of an irritant which has passed away. So that chronic eczema will follow brief exposure to the sun, and chronic bronchitis may result from a single chill.

A much more abstruse effect of cold is indirect. This acts upon internal organs which are far too deep to have their temperature altered by direct external cause. How far is the popular, and we may add, medical belief, justified, that common catarrhal laryngitis and bronchitis, pleurisy and pneumonia, inflammations of the stomach and bowels, the kidneys and liver, and even the spinal cord, are due to external cold? If we try to define our current explanation of this process, we might, in the first place, suppose that cold acts directly upon the nearest underlying important organ. Some apparent cases in support of this view do not really apply; for instance, a cold wind even without the help of dust may produce injection of the conjunctivæ, but this is a direct and immediate application of cold to the organ, just as cold water or cold air acts upon the exposed skin and produces a slight dermatitis. Nor is the undoubted production of facial paralysis a case in point, for there some impression is directly made upon the periphery, perhaps the muscular end-plates of the portio dura; degeneration follows, but there is no evidence of neuritis. Again, sore-throat and bronchitis following exposure to a dry cold air are only fresh examples of cold acting as a direct local irritant. Both affections are readily produced in many persons by talking out of doors, or by the habit of breathing through the mouth, a habit which often forms part of an unlucky circle, since it is caused or kept up by chronic tonsillitis (including the pharyngeal tonsil) obstructing the entrance to the posterior nares, or by swelling of the Schneiderian membrane from coryza obstructing the anterior entrance. But do we find that bronchitis, pneumonia, or pleurisy follows the application of cold to the chest, and that enteritis or peritonitis is produced by cold on the abdomen, or nephritis by cold upon the loins? Such is the popular, perhaps we may say the common, medical belief; but is there adequate evidence of its truth? The trunk is so well covered in cold and temperate climates, that it has scarcely any chance of being chilled except by the clothes being wet through. Granting that this is a cause of acute illness, is it not as often followed by rheumatic synovitis of the extremities as by pleurisy or pneumonia? Is it not much oftener followed by coryza, sore-throat, and cough? Is it ever followed by peritonitis? There is a belief, not without foundation, that acute myelitis is often occasioned by working in water; but in all the cases of the kind I have seen the wet and cold have affected the lower extremities, certainly not the spine. No one can suppose that cold applied to the surface could possibly produce by direct conduction a local fall of temperature in organs so deeply placed as the spinal cord and the kidneys; but it is imagined that some reflex motor or trophic influence is excited, a hypothesis analogous to that which is used to explain the employment of blisters and other counter-irritants to relieve deep-seated inflammation. The evidence for such an action appears to be inadequate; the vascular communication between the parietal and visceral pleura, the lumbar and renal arteries, is but small and irregular. We have no evidence of the existence of a nervous relation of the kind supposed, and there are, I believe, no adequate clinical facts to support the hypothesis. On the contrary, many facts are against it, as the impunity with which we place ice-bags upon the head, the thorax, and, even in cases of intestinal hæmorrhage, upon the abdomen. This treatment never produces inflammation of the lungs, the brain, or the bowels. Then it is held by many good physicians that ice applied to the chest can not only check pulmonary hæmorrhage, which I confess I doubt, but also pulmonary inflammation, which I venture to disbelieve. It will scarcely, at all events, be held by the same physician that pneumonia is both caused and cured by cold applied to the chest. We seem thus to be driven to the belief that cold applied to the surface of the body has no local result beyond the effect upon the skin; that a person may be exposed to severe and long-continued cold, causing acute suffering and even local lesions, like frost-bite, without any internal inflammation. On the other hand, we often seem to "catch heat" rather than cold in crowded rooms and overwarmed houses. The mischief seems to be, not the cold, but the chill, a sudden impression which we sometimes feel when exposed to a draught on going out of a hot room in winter, or on sitting, after profuse perspiration, in summer—an impression which we sometimes feel and sometimes do not. This chill is accompanied by a rigor, often represented by nothing but a slight shiver, or by a convulsion, in the shape of a sneeze; we feel at once that the mischief has been done, and a catarrh or some internal inflammation follows.[1] What the effect will be does not appear to depend upon the locality or the severity of the chill. In most persons in this country and in temperate Europe and America, a coryza with sore-throat, followed by a slight catarrhal bronchitis, is by far the most common result; but in many persons, especially in the summer months, precisely the same kind of exposure of the face or head, which causes a common cold, will produce diarrhœa and other symptoms of catarrhal colitis, local pain, with irregular peristalsis and discharge of mucus, with furred tongue, loss of appetite, and slight rise of temperature; while in India, China, and the Southern States of America a precisely similar chill produces an attack of ague. Does the same "chill" sometimes cause rheumatic fever, pneumonia, acute Bright's disease, pleurisy, or acute myelitis? The evidence, though far less convincing than in the three cases before mentioned, seems too strong to be set aside; but we must admit that each of these effects is comparatively rare, that each of the acute inflammations enumerated frequently occur without exposure to cold or wet and without any premonitory chill, and that, even granting the general etiology in question, we cannot pretend to say why the same cause should in one case produce rheumatic synovitis, in another pneumonia, and in a third acute nephritis.

Of contagion as a cause of disease I must say but little, partly because the subject is so vast, partly be-

[1] We cannot, I think, accept the negative position proposed by Dr. Ransom of Nottingham in denying that exposure to cold is the cause even of a cold in the head. Even if we put aside the universal popular belief as to an extremely common malady, to which all civilised languages bear witness; if we put aside the prevalent medical opinion, which is unbiased by any of the theories which have dominated our schools—we cannot explain away the direct experiments which are constantly being made in this particular. A cold in the head, though often and in many people accompanied by true fever, and running a tolerably definite course, is in others, or in the same patient at another time, a mere local inflammation. It is notoriously more common in winter than in summer; it can usually be traced to a definite exposure to cold, and does not come on without such exposure; it can be checked and aborted if, when the chill is felt, warmth is at once restored, and, even when established, its symptoms can be entirely removed for a time by a hot bath, or can be quickly, safely, and pleasantly cured if the patient will submit to confinement to bed.

cause it has already been so ably treated, and so recently, in the Croonian and Goulstonian Lectures. I will only venture the following remarks upon this part of my subject. When the bacterial explanation of contagia is criticised (and it is well that so dominant a theory should be criticised), and when we are told, truly enough, that in very few cases have diseases been definitely and rigorously proved to depend upon the presence of a specific microphyte, and that in some of the best-known and most undoubted specific fevers none has yet been discovered—in typhus fever, to wit, and plague and small pox and measles,—we must remember two important considerations in reply: First, it is abundantly clear that these diseases do not arise *de novo*, that they are strictly contagious and breed true; it is equally certain that they are not conveyed by gaseous emanations or liquid secretions, or by immaterial emanations. The fomites of plague and of scarlet fever convey the material contagion; that of variola can be collected, seen, and handled like so much arsenic or prussic acid. It is particulate, it multiplies indefinitely, it is preserved or it is destroyed by the agencies which affect only living matters. It is therefore a contagium vivum, and that being proved it is more likely to turn out one of the schizomycetes than a fungus, a microzoon or a living organism which cannot be referred to any group at present known. Secondly, although the complete demonstration of the bacterial nature of the disease has only been yet successful in four or five cases in man, yet the number equally so demonstrated which affect the lower animals is far greater; and, under the conditions of observation and experiment, we may perhaps rather wonder that the complete proof in the case of human diseases is present at all, than that the process of arriving at it is slow and the instances as yet few. The third observation is that the presence of microphytes, even when constant and pathogenic, does not determine the whole character of a disease. For we have such affections as tubercle, where the state of the soil is of greater consequence than the presence of the seed; we have the case of leprosy, where the bacilli, though constantly present, are in such small numbers that we cannot assign them more than initial importance in the result; we have cases of undoubtedly bacterial disorders which are neither contagious nor febrile, as lupus; and, lastly, there are bacterial diseases in which the microbe appears never to be distributed over the body, but to remain confined to the seat of inoculation, and thence to affect the distant organs by its chemical products, as diphtheria and tetanus. Theoretically, bacteria might produce injurious effect in one of the following ways: (*a*) By local mechanical irritation, in the same way as the acarus or pediculus; such irritation could only produce common reaction, and could not account for specific infection. (*b*) By mere bulk, their rapid multiplication obstructing capillaries or lymphatic paths, after the manner of an embolus. This, however, could only produce hæmorrhage, œdema, or other local disturbance, like the effects of the filaria sanguinis. (*c*) Again, since these minute plants grow and multiply after inoculation, they must consume an enormous quantity of material from the blood and lymph: hence it is conceivable that they might starve the host, like intestinal worms when in unusual numbers. (*d*) Again, they must consume oxygen, though probably the aggregate amount is only small, and they must excrete carbon dioxide, though this also would be but a fraction of that normally present in the blood. (*e*) They must excrete other materials, analogous to the urine of higher organisms, in so far as they are nitrogenous in composition, and more or less toxic in their effects on living tissues. (*f*) Lastly, they act as organic ferments, and change the properties of the animal fluids in which they grow from normal to poisonous.

Apart from the mode of action of bacteria, another point in the etiology of infective diseases is the method of their transference. Probably the virus, though discharged by many channels, has a much freer, more constant, and practically important outlet by a few or by one; and although capable of entering by many portals, finds it so much easier by one, that if we can preoccupy this, we may, for practical purposes, protect the whole organism from the invasion. Such channels of predilection would seem to be: for typhus fever, the expired air for leaving, and the inspired air for entering, the organism; for enteric fever, the fæces for exit, and drinking water contaminated by sewage for entrance: for scarlatina, the epidermis and the urine for discharge, and the breath for ingress; for measles, the mucus of the inflamed air passages; for small-pox, the serum and crusts of the eruption; for mumps, the saliva of the affected glands; for cholera, the rice-water discharges; for tubercle, the dried sputum. In some cases we can, more or less certainly, point to several places of invasion; thus small-pox is perhaps most often conveyed from the inspired air to the stomata of the air vesicles, and thence by the lymph and blood throughout the body; but we know from the effects of inoculation that its contagion finds a ready entrance through the nasal mucous membrane. There is some evidence in favour of occasional invasion of enteric fever through the air and through solid food, as well as through water, and also of the conveyance of tubercular infection by milk and by meat from tuberculous cows.

There is still difference of opinion as to the precise botanical position of the microphyte known as Actinomyces; but whether it, too, belongs to the schizomycetes or to a higher group of fungi, its effects are more local and irritative, and its secondary growth follows more restricted anatomical paths than we observe in the case of ordinary infective bacteria. There is now good reason to believe that actinomycosis is not conveyed by contact from diseased animals to man, nor yet by eating the flesh of an animal affected by the disease; it is probably always derived both by men and animals from the barley or other cereals infested by the parasite.

A striking proof of the need for caution in accepting conclusions before they are proved, and the fallacy to which reasoning by analogy is liable, is afforded by the case of the etiology of Ague. A few years ago the presence of a specific microphyte was assumed, and its discovery anticipated with almost as great certainty as we now feel in the case of typhus or measles. But the researches of several eminent pathologists in this direction were either fruitless or led to unsatisfactory results. At present the evidence is exceedingly strong that malarial diseases are constantly associated with the presence in the blood discs of a contagium vivum, or, if we please to call it so, a microbe, but not a bacillus or any kind of microphyte.

The presence of a distinct species of protozoon, the organisms known as Psorosperms and Coccidia, has long been recognised in the liver of rabbits and other parts in which its effects are purely local; but recently, first in France and afterwards in this country, similar structures have been recognised in the epithelial cells of molluscum contagiosum and of certain varieties of epithelial cancer. Their etiological significance is at present doubtful, but if it be established, we shall have a new form of parasitic life, producing disease in an entirely different way from bacteria on the one hand, and from the hitherto recognized epizoa and entozoa on the other.

II. We now come to another important group of causes of diseases—namely, disturbances of one or more of the bodily functions, which are at first merely functional and do not pass the limits of normal physiology. For example, it is natural for the cardiac contractions to become more frequent under mental emotion or bodily exertion. In a healthy and vigorous man who runs a short distance without previous training, not only does the heart beat twice as rapidly as at rest, but its contractions become often irregular, while a loud, blowing murmur shows temporary tricuspid incompetence. If the exertion is repeated moderately, systematically, and in a young and healthy subject, the effects described cease, and will only reappear if he falls out of training, or if he exceeds the limit of exertion for which he is competent, or if he runs under unfavourable circumstances, as, for example, with a distended stomach, or if he attempts to repeat the feats of youth, when increase of adipose tissue, stiffness, and perhaps muscular degeneration have come with advancing years. But when violent mental emotion or excessive bodily exertion recurs too often, what was a temporary physiological variation becomes a pathological habit; the heart is readily excited to palpitation, it does so on less and less provocation, and at last without any assignable provocation at all; what was an occasional, has become an habitual, deviation from the normal. Moreover, if such functional disorders continue, they more or less surely lead to structural changes; the irritable heart becomes hypertrophied; degeneration of its tissues follows; the over-strained aorta dilates; the valves become incompetent, and the whole vascular apparatus falls into irremediable ruin. Again, a

cold breath of air upon the face provokes a sneeze, or the presence of sulphurous acid gas in the inhaled air causes a cough, and the reflex mechanism called into action in each case is rightly claimed by the physiologist as part of the wonderful working by which the body is protected and preserved. But let the same irritants be too long or too often experienced, and, in addition to the reflex nervous mechanism, there ensue nervous changes, vaso-motor, secretory, and trophic, until a cold becomes a catarrh, and the cough becomes bronchitis. Not less frequent is the same progress of events in the digestive system. The stomach is supplied with food in too large quantities or at too short intervals, or imperfectly prepared by mastication and insalivation, or the vascular and secretory activity of the gastric mucous membrane is disturbed or completely inhibited by ill-timed cerebral excitement: the result is a physiological check to gastric digestion, and the undigested food becomes a foreign body and acts as a local irritant; the process, if long continued, leads to chronic gastritis, or perhaps to dilatation of the stomach, or the peptic glands strike work altogether, and atonic dyspepsia results. Again, inattention to natural calls may lead to nothing worse than irregular action of the bowels, but when the colon has become habituated to fæcal distension, persisting for many days, not only does its reflex peristalsis become dull and sluggish, but mechanical dilatation ensues, and we may at last have a condition of true intestinal obstruction developed from functional disturbance. Similar illustrations from the menstrual function in women are only too common.

I will only add one more. When certain articles of food, particularly spices and alcohol, are taken in more than a very moderate amount, the result is temporary vaso-motor paresis of the face; dishes compounded with curry or chilies will produce this effect in almost every case when admitted to a virgin stomach. If the degree of stimulation is moderate and the self-adjusting power of the organism good, the nervous system becomes habituated to the stimulus and the effect no longer follows: but if either of these conditions be absent, the flushing after meals becomes habitual until it is excited by wholesome food or by diluted alcohol. We then have a frequently repeated local erythema of the face which we may compare physiologically with the erythematous and urticarial eruptions produced by drugs and by special articles of diet. Recurring after every meal, this vascular dilatation at last no longer disappears in the interval, the skin and subcutaneous tissues hypertrophy, the sebaceous glands are in the condition of the submaxillary during stimulation of the sympathetic nerve, and the result is a permanent structural disease, gutta rosea—erroneously called acne rosacea,—a condition always, I believe, associated with flushing after meals, though it is often accompanied in women about the climacteric period with ovarian disorder. I need hardly repeat, what all experienced physicians recognise, that although the gastric irritant is, in most cases, some form of alcohol, yet the disease is produced not by alcohol directly, but by the gastric irritation engendered by it. Without the latter there will be no trace of gutta rosea in a patient suffering from delirium tremens or cirrhosis of the liver, while some of the worst cases of this unsightly malady occur in ladies who have never tasted strong drink and who are painfully scrupulous in their diet.

Of this important group of diseases which have their origin in physiological disturbance gradually becoming more frequent, and that end in permanent structural disease, we have always to bear in mind that, to use a homely proverb, it "takes two to make a quarrel." So it takes two to produce a disease—the blow and the reaction, the irritant and the patient. When a man complains that wholesome food disagrees with his stomach we might retort that his stomach disagrees with his food. What produces a slight and transient disturbance, or no disturbance at all, in one person, will seriously and perhaps permanently derange another; much depends upon habit and practice, and on voluntary habit and regulated practice. The muscular exertion which would produce utter exhaustion, with feeble pulse, cold sweat, complete anorexia and rejection of food, in the case of a young and healthy man who has never tried his powers, is borne with no effect but the pleasant sense of fatigue and increased digestive powers by an athlete in full training. The amount of liquor which, in the case of an unpractised drinker, would simulate mania, paralysis, or coma, will scarcely dull the senses of a practised toper. The few whiffs of tobacco which produce vomiting and something like collapse in a schoolboy, have no effect whatever when, by reason of use, the senses are exercised thereby. The same consideration is forced upon us by the action of irritants upon the conjunctiva and skin, where we can observe all gradations from purely traumatic inflammation limited in duration by the irritant to that which, though thus set up, continues long after it has ceased to act; and, finally, inflammation produced by no external cause, and therefore, as we say, idiopathic. If this is true of inflammations in general, it equally applies to the reaction of the organism to other mechanical, thermal, or chemical irritants, and, above all, to its behaviour under the influence of animal poisons. Some of these appear to be so violent and efficient that all they need is human tissues to act upon. The contagion, once brought into effectual contact with the organism, produces an invariable and inevitable sequence of effects. Such, or nearly such, may be said of vaccinia, of typhus fever, and of glanders (to take three striking examples), but even here the effect is not solely dependent on the contagion and independent of the recipient. It is a truism to say that neither croton oil, nor cantharides, nor tartar emetic ointment will produce inflammation upon the skin of a corpse, or that the hottest sun will produce no eczema on a mortified limb, but it does seem at first sight as though sufficiently hot or cold appliances and sufficiently violent poisons would produce approximately the same effects upon any living tissue. Even this, however, is not proved; we put down such and such as the lethal dose of arsenic or laudanum, but, as we know, opium eaters in Lincolnshire and arsenic eaters in Styria take much larger quantities with impunity. Morphia has no effect upon pigeons nor belladonna upon rabbits, and both arsenic and belladonna can be given to children in far larger doses than the proportion of their body weight to that of adults would dictate. Measles, small-pox, and influenza do not produce their effects in every case, even when they invade an unprotected population; some animals, though in other respects closely allied in their functions to man, are incapable of receiving certain contagia—syphilis, for example, hydrophobia, anthrax, and relapsing fever. The protective influence of most, but not of all the specific fevers against their own recurrence is a familiar fact, and belongs to the same order as the artificial protection from small-pox, as afforded by what is probably its attenuated virus (vaccinia), and the artificially produced resistance of animals to certain diseases. All of these are examples of an efficient cause of disease failing for want of a suitable object to play upon. An old man is less obnoxious to enteric fever than a child, a vaccinated child affords little hold for the virus of small-pox, a population in which measles has been endemic for centuries has impaired susceptibility to its contagion; so that we only learn how terrible this disease can be when it is allowed free play on the virgin soil of the Fiji Islands. There must be conditions, at present unknown, which protect a large number of children from scarlet fever, though exposed to infection, for it does not run through schools with the same freedom as mumps or measles or rubeola; nay, in some cases the susceptibility of the organism varies so widely that it becomes a more important element in the production of disease than the existence of contagion itself.

III. An important point in the etiology of most diseases is one which I learnt from Dr. Wilks; and, although I have not met with the observation elsewhere, it will, I feel sure, be backed by the experience of those whom I address. It is a commonplace of medical writers that acute diseases, instead of terminating by resolution, often continue in a mitigated but protracted form, and hence the malady which is at first both sharp and short (ὀξυς) becomes less severe and more protracted (χρόνικος); hence the adage: "Si dolor gravis, brevis; si longus, levis." But, though this is true in certain cases of rheumatic fever when untreated, of successive attacks of gout, of eczema, of tubal nephritis, and of malarial fever, yet the opposite order is not less important to observe—viz., that acute diseases are often developed out of chronic. The sudden seizure of a man in all the vigour of youth and health, by which the strength and ease of the morning is changed in a few hours into prostration, severe suffering, high fever, and a perverted state of every function, both of mind and body, is so striking and dramatic an event that it naturally arrested

attention. Such cases have been generally taken for description by the best medical writers, who naturally choose the most striking and picturesque aspects of disease. But probably the only maladies in which such a mode of onset is at all common are those which are contagious, and depend upon the invasion of a healthy organism by a countless swarm of foreign organisms attacking it from without. They are so numerous and their poison is so powerful that they at once overcome the utmost vigour of youth and health, just as the strongest man is immediately subdued by stifling gases or by the venom of a serpent. In most other cases of disease, however, the apparently acute outbreak is really the result of a less obvious but no less important antecedent failure of health. Even in the case of infective diseases experimental pathology teaches us that, while on the one hand an organism may be rendered refractory to the invasion of the virus, on the other hand it may be artificially prepared (as by the injection of the cultivation fluid of blue pus), so that the subsequent invasion of a very attenuated virus shall produce the most severe effects. Thus it is a matter of common experience that enteric fever often begins with certain days, or even weeks, of diarrhœa; hence arises, at least in part, the difficulty of fixing the precise date when the specific fever began. May it not be that the local conditions of the intestines render them more obnoxious to the action of the contagion when it invades? In the same way genuine diphtheria is often preceded by non-specific and subacute angina; and may not here, again, the inflamed mucous crypts and lymph follicles and desquamating epithelium prepare a favourable nidus for the reception of this specific virus? In the case of phthisis, there is reason to believe that the bacilli of tubercle seldom make a successful inroad until local pulmonary catarrh or general feebleness of health have prepared the way for their reception. But if this be to some extent true even of contagious diseases, it becomes the rule, and no longer the exception, when we study the onset of many non-specific, but acute, inflammatory disorders. Abscess of the brain is acute, severe, and rapidly fatal when once developed, but it never attacks previously healthy patients. It is always preceded by injury, by caries, or by primary suppuration. How often do we find acute lobar pneumonia, a disease in many ways allied to a specific exanthem, not occurring in its classical form as a primary attack in a previously healthy man, but as a secondary complication of cardiac disease, of enterica, of rheumatism, or of chronic Bright's disease; sometimes in patients who are bedridden, and have never been exposed to cold and wet. Acute suffocative bronchitis is very rare in the young and healthy; the vast majority of cases occur in old and decrepit persons who have long been subject to a winter cough, emphysema, and consequent dilatation of the right side of the heart. The cases of phthisis which are most inflammatory—cases of "galloping consumption"—are almost always less rapid and acute than they seem. Careful inquiry brings out in most cases the fact of failure of strength, loss of flesh, and sometimes of definite local symptoms in the chest or throat, which have long preceded the apparently sudden outbreak of the disease. Phthisis ab hæmoptoë is not infrequent as a clinical event, although pathologically hæmorrhage is probably never the origin of phthisis. But when a patient tells you that while in the enjoyment of vigorous health he burst a bloodvessel under the stress of some sudden effort, how often do we find that scarcely noticed preceding symptoms of pulmonary disease have been present, while the physical signs point to changes no longer recent? How frequently after death from what seemed to be an unusually rapid case of phthisis, does the post-mortem room reveal long antecedent and partially obsolete lesions? Even mechanical lesions, like volvulus and other terribly acute and severe forms of intestinal obstruction, are often unexpectedly shown at the necropsy (without which experience and record of such cases is all but useless) to be only the final result of slow and gradual changes which prepared for the final catastrophe. In the case of cancers, which, in spite of numerous and careful observations, are believed by many pathologists to be parasitic, or conveyed by some form of infection from without or of dyscrasia from within, is it not a truer view to regard them as in each case, not originally engrafted upon or invading the body, but springing up as a perversion of local growth, sometimes at certain periods of rapid development, as in the sarcomata of the bones and joints of children, but most particularly at the periods of involution, disuse, and degeneration? If this view be correct, we shall in many cases find that the wide, striking, and at first sight almost incredible perversion from the normal structure of the part is not so sudden or "heteroplastic" as it seems, but originates by a gradual increase from minor perversion of growth which we call inflammatory or benignant. As cases in point, I would adduce the development of cancer of the skin from warts, the relations of cancer in the breast to Paget's disease of the nipple, the supervention of mycosis fungoides upon extensive superficial dermatitis, the connexion of carcinoma linguæ with syphilitic or other leucodermic patches, of labial cancer with smoking, of cancer of the glans penis with phimosis, of carcinoma of the gall-bladder with calculus, and, lastly, the remarkable fact that the favourite seat of cancer of the alimentary canal is at the narrowest passages, where friction and irritation are most probable and frequent.

IV. We have hitherto spoken of diseases which may be considered accidental—that is, a result of circumstances,—and from which therefore, were those circumstances constantly favourable, the organism would be free. What forms of disease would still remain? First, there would in a thousand individuals of any species be a certain number which came into the world imperfectly formed. To judge from the domesticated races such malformation is far from infrequent, but places the individual at such a disadvantage that it rarely survives. Among feral tribes abnormalities and monstrosities are perhaps less frequent, and would be more certainly suppressed in the keen competition of unprotected rivalry. In the human subject congenital diseases form a comparatively small, but extremely interesting, etiological group. We must distinguish them into three very diverse kinds.

1. Deficiencies, redundancies, or abnormalities due entirely to some deviation in the development of the embryo. Familiar examples are: harelip, spina bifida, hypospadias, atresia ani, and arrested or abnormal development of the heart and great vessels. The last-mentioned group is the only one of practical importance to the physician; they were dealt with by a late Fellow of the College, Dr. Peacock, with characteristic fulness and accuracy, and if he sometimes included under this head a larger proportion of cases—as, for example, those of tricuspid stenosis—than we should now admit, the reality of such errors of development remains independently of questions as to its extent. When we have traced the origin of diseases to such congenital malformations we have reached the term of present and perhaps of future knowledge. What determines such defects, excesses or varieties, is now, and is likely to remain, a mystery. They are independent of any accidents of utero-gestation, since they are common amongst vertebrate and invertebrate animals, and also in the vegetable kingdom. Many, perhaps most, of such malformations may be regarded as extreme cases of sports or variations from the ancestral form, of which the laws are unknown and the existence unexplained by the theory of natural selection which depends on their occurrence. I would only deplore in passing the lamentable proof of how slowly superstition gives place to a rational view of natural objects which is afforded by the belief that nævi, cleft palate, and deficient limbs are due to what are called "maternal impressions," a survival pardonable and even interesting when we meet with it among ignorant villagers, but without excuse when it occurs in a learned profession. 2. The second natural class of congenital diseases are those which, though present at birth, are the result of intra-uterine disease. Lesions of the right side of the heart from fœtal endocarditis (some would say rheumatic endocarditis), deposits of lithic acid in the fœtal kidney, intra-uterine ague and variola are more or less authentic examples; but probably the most frequent, and certainly the most important, is congenital syphilis, a disease directly transmitted by infection from one or other of the parents to the offspring. 3. The third etiological group of congenital diseases are those which are derived by inheritance from the parents, for the most part developing long after birth. On this large subject of hereditary disease I will only make the following observations: First, that congenitally transmitted diseases, of which syphilis is the most important, do not come under this head. Next, that most cases of cancer, though sometimes strongly hereditary, are nevertheless in the great majority of cases not transmitted at all. Thirdly, that if, as most naturalists

a free, acquired properties are not transmitted to the offspring, it is very difficult for us to explain the undoubted hereditary transmission of gout.

As sources of fallacy in estimating the influence of heredity, we must bear in mind the probability of a son living in the same place, working in the same trade, and adopting the same habits as his father; also that very common diseases will appear to be hereditary by mere coincidence. Hence all statistical statements as to the frequency of rheumatic fever, cancer, or phthisis in the children of parents subject to these diseases ought to be checked by control figures showing its frequency in others. Lastly, we must not attempt to deal with obscure and ill-defined diseases; nothing valuable can come of statistics with respect to "rheumatism," "tonsillitis," or "epilepsy" without further definition. Yet we see jumbled together, in the attempt to establish an authentic inheritance, diseases of such different pathology as rheumatic fever, gonorrhœal synovitis and gout, and we are told that a patient's eczema is hereditary because his father suffered from urticaria, a brother from "psoriasis" (possibly syphilitic), and his maternal grandfather from gout. Or a "neurotic" inheritance is established on the strength of convulsions and paralysis having been remarkably common in the family, when we find on inquiry that the cases consist of infantile paralysis, hysteria, traumatic epilepsy, hemiplegia from embolism, and paraplegia from tubercular vertebræ. In genuine cases of hereditary disease there is transmission, not of the disease itself, as in the case of syphilis, but of some structural or functional, histological or chemical, peculiarity which renders more likely than usual the development of such diseases as gout, insanity, or hæmophili. A child born with a syphilitic rash and snuffles is not more likely than another to acquire syphilis if exposed to its contagion; it has the disease already; but a child born of decidedly gouty parentage differs from another in the ease with which the same causes which produce the disease in general will be efficient in his case. Hereditary tubercle, again, is only as a very rare exception, due to congenital transference of the virus, such that the infant enters the world with the bacilli in his tissues. In the vast majority of cases it means liability of the smaller bronchial tubes to catarrh, a vulnerability of the joints, and an excessive hospitality for the tubercular microbe or deficient capacity for dealing with him on the part of a too feeble phagocyte.

V. It has long been the custom to explain the occurrence of certain diseases by referring them to a previous existing disposition, or, to use the Greek form of the word, *diathesis*, of the patient; but it has always appeared to me that the assumption of such a cause is unscientific and prejudicial to the advance of etiology. To say that a man who has had rheumatic fever has a disposition to its recurrence is only to say that rheumatism is a disease which usually occurs more than once in the same person. We gain nothing by referring the occurrence of the rheumatism to a preceding rheumatic diathesis. If a man's father has had phthisis or gout he is no doubt predisposed to these diseases; but this, again, is only saying that phthisis and gout are often hereditary. The disposition of tendency for these or other diseases is either carried out or it is not; if it is never carried out, its existence cannot be proved, and is of no practical importance. If it is carried out, the right way to put the fact is to say that the disease occurred, and the supposed predisposition to it is only a roundabout way of repeating the assertion. If we find albuminuria and other signs of Bright's disease we may, if we please, say the patient is predisposed to apoplexy. If the blue line is on the gums, we may say that he is predisposed to paralysis of the extensors of the forearm; if he is a dram-drinker, that he has a cirrhotic diathesis. But none of these would be counted cases of diathesis in the conventional meaning of the word; and I venture altogether to deny that, apart from actual morbid events, either present or past, from hereditary taint or from such probabilities as exposure to disease from age or sex or occupation, that it is ever possible to predict the future advent of disease. Along with this lingering remnant of theoretical and metaphysical medicine we ought surely to discard from etiology such terms as "dyscrasia" and "temperament"—phrases which belong to the exploded humoral system of pathology. We know that there is no such thing as the black bile, and that phlegm is not secreted by the hypophysis cerebri; how, then, can we talk of the due temperament of the four humours or of their ill temperament, bad mixture, or dyscrasia? The division of men by their imaginary temperaments is arbitrary and without any basis, scientific or practical. It may be compared to the false sciences of phrenology and chiromancy. Lastly, if the existence of these etiological conditions is often arbitrary, what shall we say to the supposed blending of different diatheses? Just as it was found necessary to add to the four classical temperaments, and to admit "lymphatic," "nervous," and nervo-sanguineous, so it has been supposed that a hybrid disease like "rheumatic gout" can exist, and that scrofula and syphilis, herpetism and arthritism, may mix with each other, and modify the effects of a wound or the symptoms of a specific fever. All such theories appear to me to be baseless, and to prevent investigation into etiology by premature explanation. So far as such vague doctrines can be brought to the test, they fail. On the one hand, our present knowledge of the true etiology of syphilis, variola, scabies, scurvy, gout, and tubercle forbids our admitting the possibility of hybrids between an acarus and a bacillus, an amœba and a crystal; on the other hand, clinical experience shows that psoriasis, for instance, may occur in a case of syphilis, develop, and be cured quite independently of the latter, and that the same holds good of rheumatism and typhoid fever, gout and cholera, ague and pneumonia. The whole conception of complex diseases belongs to a time when each was regarded as a separate living thing, and is out of place if we look upon them as disturbed physiological conditions.[2]

VI. To go back once more to the ovum or organism in its simplest form, let us now suppose that it has inherited nothing but physiological—that is, normal—structure and tendencies; that it has met with no external disturbance, or, as we express it in medicine, is free from congenital and acquired diseases. Nevertheless, we know that it will not last for ever. One disease which was common to all its predecessors it has undoubtedly inherited as a diathesis, and this fatal heritage is a disposition to die. Its period, like theirs, is limited, and when its natural term is reached it too will cease to perform the functions of a living being, and its protoplasm will become subject to the reactions of common chemistry. Why either a cell or a more complicated vegetable or animal organism should wear out is not easy to explain; in the animal machine with which we are best acquainted its constructions and its working are so admirably contrived, so delicately adjusted, so finely compensated, that, while on the one hand we wonder that so fragile and exquisite a piece of mechanism should escape the various accidents of life or throw off the effects of injuries, we wonder scarcely less that so perfect a machine should ever wear out. If no external injury befal the body, no poison, no bacillus, no parasite approach it; if expenditure of force be restrained to the narrowest and most selfish needs of the individual, and the income of food be limited in proportion, there are yet certain expenditures which must continually go on. The diaphragm and the heart are muscles which have no prolonged holiday like those of the limbs during sleep; yet they also have their intervals of rest, no less constant than of work. And it does not appear that the musculo-nervous apparatus or the secreting organs ever cease to act by mere weariness of having toiled for fourscore years. Degeneration is not mere exhaustion of the vital powers, or using up of the first impulse which was given at conception, in the same way as a moving body gradually comes to a stop by friction, or a burning mass is quenched when the fuel is consumed. On the contrary, we can, I believe, always refer death from old age either to incidental diseases of external origin—injuries, cold, or contagia—or else to structural changes, particularly of the vascular apparatus. A continued hydraulic strain upon the great arteries is a kind of mechanical injury which leads to a chronic inflammatory process and a gradual destruction of their elasticity and power of resistance to blood-pressure.

That old people are far more liable than young to

[2] I would here venture to urge a definite abandonment of the term "scrofula." Its original application, as we all know, was to the swollen glands of the neck, and it was used at the time when the cervical lymph glands, the secreting submaxillary glands, and the "ductless gland," which we now call the thyroid, were all supposed to be much of the same nature. In modern German usage the word "struma" is not, as in England, a synonym for scrofula, but means what we call bronchocele. The traditional description of two types of scrofulous children, if it has any meaning at all, seems to apply to tuberculosis in the one case and to congenital syphilis in the other. The detection and separation of the latter condition by Mr. Hutchinson appears to me one of the principal achievements of modern English medicine.

succumb to accidental disorders, such as diarrhœa, bronchitis, pneumonia, and enteric fever, may be to some extent explained by the degenerated state of their arteries, the frequently emphysematous condition of their lungs, and the probability that one or both sides of the heart have become dilated. Deaths which are ascribed to old age may be the result of chronic diseases, which chiefly affect the latter period of life, such as cancer, granular degeneration of the kidneys, bronchitis and emphysema, apoplexy from disease of the cerebral vessels, and various forms of structural disease of the kidneys and bladder from enlargement of the prostate. Or the disease may be an accidental one to which all ages are liable, but the power of resisting it is diminished. In this last respect the two extremes of life resemble one another. The freshly lighted taper and that which is burnt down to its socket are both easily extinguished by the slightest puff of wind. Hence the mortality of typhus fever, variola, and enteric fever in persons over sixty; hence the apprehension with which we regard pneumonia in an elderly patient.[3] The most common causes of senile mortality are the same as those which are fatal among infants—diarrhœa, particularly in the summer months, and bronchitis, particularly in the winter. To these trivial disorders an old man succumbs as he does to an accidental injury, to a fracture of the thigh or the rib. When none of these external disturbances have occurred, when the long-drawn thread of life is cut at last, suddenly during tranquil sleep or in the midst of placid conversation, the cause is probably always syncope. It is the heart and bloodvessels which give out at last. We must, however, admit that old age is otherwise peculiarly vulnerable. The cartilages are calcified, the bones are brittle, and the loss of fat diminishes the elasticity of the tissues and adds to the risk of shock. The lungs are light and thin from senile emphysema, the muscular strength is greatly diminished, so that there is less power in making voluntary efforts in respiration, and the nervous system is no longer sensitive and active, so that conservative reflex movements are sluggish, and the old man can neither save himself from a fall nor appreciate the deficiency of oxygen in the blood which reaches his brain. The loss of appetite prevents due nourishment, and the bodily heat is difficult to maintain. The organs of sense are, with few exceptions, impaired, chiefly from demonstrable structural changes, but also from diminished excitability of the nervous centres. With respect to the mental powers, it is difficult to separate the action of the cerebrum from its supply of blood; in true senile dementia there is probably always arterial hæmorrhage or obstruction or wasting of the cortex. Loss of memory appears to be the only mental symptom which is constant after a certain age. We have numberless examples of high intellectual powers, of beauty and dignity of character surviving physical decay; but whatever may be the clearness of judgment, the eloquence of language and energy of will in an aged body, it would probably be found without exception that such mental exertion can only be maintained for a short time. After Sophocles had triumphantly vindicated his mental powers at ninety years of age by reading a chorus from his last tragedy, he probably did no more for that day.

SENILE TUBERCULOSIS.[1]

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IT will be remembered that Sir James Paget, in his Clinical Lectures, has a paper on senile scrofula. This paper reminds us of one of Bacon's "Essays." It is very short, yet in its four pages it gives such a complete epitome of the subject that it will be long before anything that is really new is added to it. The value of Sir James Paget's observations is, of course, in no degree impaired by the circumstance that they were published before the exact pathology of the disease had been discovered; but, as it has since been shown that what was formerly spoken of as scrofula or struma is really tuberculosis, I shall exchange the one term for the other, and speak of senile tuberculosis instead of senile scrofula. The subject is one of wide clinical interest and importance. The disease in its various forms is far from rare, and its diagnosis is often in its early period very difficult. I hope, therefore, I may be justified in relating and discussing some of the examples of it which I have met with. But I may first allude very briefly to the incidence of tuberculosis at other periods of life. Statistics show very clearly that surgical tuberculosis is most prevalent between the ages of three and ten. But yet it may occur at a still earlier period. I have seen, for instance, at least four cases of tubercular caries of the spine (Pott's curvature) in children under a year old, and in one the disease began when the child was only seven months. After ten, tubercular disease (for instance, of the hip or the spine) becomes steadily more rare as age advances. I have met with it in all the decades up to that between seventy and eighty, but each decade shows, I think, a progressive diminution. The bearing of age on diagnosis deserves attention, for in some instances an oversight seems to have been due to the fact that the possibility of the occurrence of tubercular disease in a patient between forty and fifty or between fifty and sixty had not been considered or even entertained. About five years ago a woman, aged forty-five, at St. Bartholomew's Hospital, who stated that she had been eight months under a surgeon—who, however, had never examined her—for "rheumatic pains and sciatica," was found to have angular curvature and a large lumbar abscess. Another patient, aged fifty-five, who had tubercular disease of her hip, was supposed for several months to be suffering with chronic rheumatism. Such cases serve to enforce the recollection that tubercular disease may be met with at any period of life As to the age at which tuberculosis should be regarded as senile I think the line may very well be drawn at fifty. This limit is an arbitrary one, but it is sound clinically; for patients who develop the disease at or after this period are usually enfeebled in general health and have tissues that are already old in the sense of being degenerate.

The following case, recently under treatment at St. Bartholomew's Hospital, may be related as a typical example of senile tuberculosis. A man aged sixty-three, but who looked seventy, applied as an out-patient for advice about his knee. This, he said, had been weak, painful, stiff, and a little swollen for two months. I regarded the case as one of senile osteo-arthritis, for this view best accorded with general probability, and was one with which the symptoms agreed. The limb was scarcely at all flexed, there was no effusion into the joint, on passive movement the leg was easily flexed to a right angle with the thigh, and there was slight grating, such as is so often found in osteo-arthritis. He was ordered a series of four small blisters, and advised to walk for the time being as little as possible. At his next visit a fortnight later, however, the synovial membrane felt more thickened and puffy, and the skin was abnormally warm and somewhat dusky and glossy. Thinking the disease was possibly tuberculous, I had his lungs examined, and he was pronounced to have phthisis. In another fortnight the joint suppurated, and a collection of pus formed on the inner side over the head of the tibia. He was now admitted into the hospital. The abscess burst the next day, and about half an ounce of caseous pus was discharged. The resulting sinus showed no tendency to heal. For two months the limb was kept on a back splint, by which the joint was maintained at complete rest; but the swelling due to synovial thickening increased, and the thigh muscles wasted. He had a troublesome cough and free expectoration. The question was discussed whether, as he had phthisis involving both lungs, amputation could be ventured upon. The risk of the operation seemed less than that of allowing him to remain confined to bed with his temperature, as it often was, at 102°. I therefore removed the limb. The wound healed by primary union in almost its whole extent, and was dressed only once. The improvement in his general health was very marked. He quickly gained flesh and strength, and his temperature became normal. This case is, I think, noteworthy, not only as one of senile tuberculosis, but as evidence on the question whether amputation should be performed when joint disease is complicated with phthisis. As to this I may say that I have on several other occasions

[3] After seventy or seventy-five sometimes a better prognosis is possible, and I have known recovery from pneumonia at eighty. This perhaps is because those who outlive threescore years and ten are picked lives, and by reason of strength survive.

[1] Paper read at the Harveian Society in February, 1892.

performed amputation for disease of either the wrist, knee, or ankle in patients with well-established phthisis, and the result has, as in this case, been in no way prejudiced by the condition of the lungs. In one, however, free hæmoptysis followed the use of ether; and it is safer, no doubt, to use chloroform in such cases.

In the Museum of St. Bartholomew's Hospital is a specimen thus described in the catalogue:—A knee-joint exhibiting well-marked pulpy degeneration of the synovial membrane. Microscopically, the thickened synovial membrane contained abundant deposits of miliary tubercle. From a lady aged sixty-seven, in whom the disease had existed for twelve months. The limb was removed by Mr. T. Smith. Two months before amputation the joint was tapped, and clear synovial fluid was removed. The patient made a very favourable recovery.

In the next four cases of senile tuberculosis the hip-joint was the part affected. A female patient aged fifty-five, who had been for some months in failing health, and who looked prematurely old, was attacked with stiffness and somewhat severe pain in the hip, attended with muscular wasting. For some months these joint symptoms were thought to be rheumatic. When I first saw her, however, the evidence that the disease was tuberculous seemed conclusive. She had phthisis, and had twice had free hæmoptysis; and the joint mischief had proceeded to suppuration, and an abscess holding about six ounces of pus was found beneath the tensor fascia femoris. Weight extension was applied and afterwards a Thomas's splint; but the disease steadily advanced, the abscess, after being opened aseptically, discharged about two ounces of pus daily, and the limb became shortened and everted. For some months the condition of the lungs appeared to be stationary, but then it became more active; there were three attacks of hæmoptysis, and purulent expectoration was free. The patient gradually wasted, and died about two years after the commencement of the disease. The hip-joint was at the time of death completely destroyed, the head of the femur had been absorbed, and the limb was two inches short and much everted.

For the following case I am indebted to Mr. Langton. A woman aged fifty-three, admitted into St. Bartholomew's Hospital in January, 1890, stated that in the previous March her left hip became painful and stiff. Gradually getting worse, she could move about only on crutches, and in the December she observed a swelling on the outer side of the joint. On examination she was found to have well-marked symptoms of hip disease—stiffness, shortening, eversion, and an abscess. The abscess was opened two days later, and subsequently counter-openings were made. She became rapidly worse; the urine (normal at first) now contained albumen. She became delirious, and died of exhaustion on April 10th. On post-mortem examination both lungs were tubercular; the right kidney was disorganised by tubercular disease; adrenals were tubercular. The hip-joint was disorganised, the head of the femur being party destroyed, the acetabulum perforated, and a collection of pus had formed in the pelvis. The lymphatic glands running upwards along the iliac vessels and the aorta as far as the diaphragm formed a large elongated mass of tubercular glands, many of which had undergone calcareous degeneration. The head was not opened, but the symptoms observed before death seemed clearly to indicate the existence of tubercular meningitis. I may add that Mr. Bowlby informs me he recently made a post-mortem examination in which he found that a woman aged fifty-six had died of general tuberculosis and tubercular meningitis.

A man aged fifty-six had stiffness of the hip and pain extending from that joint to the knee, with marked muscular wasting. Within three months an abscess formed in Scarpa's triangle, and when this was opened a sinus, discharging pus freely, remained. The disease steadily advanced in spite of recumbency and weight extension, and the joint became disorganised. When he died from another cause fifteen months later the disease was evidently still in progress, and appeared to have become incurable.

In the College of Surgeons' Museum is a specimen thus described in the catalogue: "A hip-joint, in which, after the head and upper part of the neck of the femur had been destroyed, the shaft was drawn up, so that the remains of the neck rest in the ilium just above the acetabulum. It was taken from the body of a woman aged seventy, who ten years before her death had apparently scrofulous disease of her hip. Abscesses formed and opened in the groin, and ultimately the limb became much everted and shortened. After her death, by apoplexy, her lungs and liver were found tuberculous." This case is not only (in common with Case 2 and Case 3) a complete counterpart of hip disease in its more destructive form in the young, but as an example of senile tuberculosis is remarkable in the recovery of the patient. Such a result is, I think, very exceptional. It is much more usual to find, as in the three previous cases, that the disease advances, though it may be slowly, to a fatal termination.

I do not remember to have seen an instance of senile tuberculosis affecting the shoulder-joint, but I have met with it twice in the elbow and several times in the wrist. I may relate one case as an illustration. A man, aged sixty-seven came to the out-patients' room about six years ago with his left wrist swollen and weak, and with yielding of the ligaments, so that it was becoming distorted. The synovial membrane could be felt thickened and pulpy, and there was very marked wasting of the muscles of the forearm. To support the wrist he nursed it with his other hand. The disease, which he attributed to a wrench at his work, had been in progress four months. He complained of little pain. The hand and forearm were enclosed in carefully moulded leather splints and kept in a sling. For the next month the condition of the limb improved—swelling, heat, and redness of the skin subsided, and the joint felt, he said, much stronger. He now, without asking whether it would be safe, tried to work at his occupation as a cooper, but this produced an immediate relapse, and within three weeks an abscess formed. This was evacuated, but suppuration continued, and two sinuses remained. Suppuration was quickly followed by widespread destruction of the ligaments, so that the hand could be freely moved in all directions on the forearm, while the different carpal bones were felt, with a probe, bare and detached from each other. Amputation was therefore performed. The wound healed slowly, but without complication. On examination the whole carpus was infiltrated with curdy pus; the bones, many of them entirely denuded of cartilage, lay loose in tubercular granulation tissue, and pus had burrowed for some distance among the flexor tendons of the forearm. No microscopic examination was made, but the naked-eye appearances exactly corresponded with those of tubercular joint disease in young subjects.

One of the most rare of all the forms of senile tuberculosis is spinal caries. Sir James Paget has described a clear example of this affection in his "Studies of Old Case-books." The patient, a barrister aged about fifty-six, had pains in his back and sides, which were thought to be rheumatic. Four months later he had constant pain along the six lower ribs and at the epigastrium. Six months after the commencement of his disease, Sir James Paget found two spinous processes in the lower dorsal region prominent, and deflected to the right. With prolonged rest, and with issues kept open by the side of the spine, he slowly recovered. In four months he could sit up without pain. He regained health, and lived to be eighty-one.

I know of only three other cases: 1. In the catalogue of the College of Surgeons' Museum is a specimen (No. 3406), which is described as follows: "The five upper cervical vertebræ and the condyloid portion of the occipital bone affected at several points with ulceration (caries). The right transverse process and the lower articular surface of the same side of the atlas are entirely destroyed. The disease has also affected the corresponding condyle of the occipital bone, and the articular surface and side of the body of the axis, the right tranverse process, and the side of the body of the third, and the left occipito-atlantal articulation. No symptoms manifested themselves during life but those attributed to melancholia." As there is no history of the case, and as there was no discharge of pus during life or note that any was found after death, it may, of course, be questioned whether the disease was, as I believe, tubercular. The appearances, however, are exactly like those met with in tubercular caries, nor am I acquainted with such appearances as the result of any other form of disease. 2. I am indebted to Mr. Butlin for the following case: A healthy looking man aged sixty-seven was admitted into St. Bartholomew's Hospital in December, 1886. A month before, he had fallen off a table, and struck his neck against a chair. This injury was followed by stiffness of the neck, which gradually increased. In the following March he noticed a swelling in the neck, which gradually enlarged. In July, Mr. Butlin, finding that an abscess had formed, opened it. This relieved him, and the wound healed. In

December, he returned to the hospital, complaining of severe pain, increased on the slightest movement, and situated on the left side of the neck and head. His temperature was not raised. The head and neck were enclosed in a leather case. This gave him great relief, and enabled him to sleep in comfort. In the following January an abscess (deeply placed behind the sterno-mastoid) was opened, and healthy looking pus in considerable quantity was evacuated. In February matter was found above the right clavicle. This, which proved to be fetid, was let out. The temperature was now 103°. An attack of cellulitis of the head and neck followed, but subsided; the discharge diminished, and in October had almost entirely ceased. But in November he had further suppuration, and a temperature reaching 104°. This attack also subsided, and in December he was well enough to be discharged. The leather collar was still worn, so as to support and keep his head as far as possible at rest. His subsequent history is unknown. I frequently saw this patient, and I believe, with Mr. Butlin, that the case was certainly one of tubercular caries of the spine. 3. A man aged sixty-three was in St. Bartholomew's Hospital about six years ago, under my care, with stiffness of the neck, so that he could neither nod nor rotate his head, with considerable widening and bony thickening in the neighbourhood of the spines of the upper cervical vertebræ, and with pain radiating over the occiput and down the sides of the neck. His head had sunk forward so that his chin was nearly on his sternum, and he moved cautiously and turned over in bed with difficulty. When sitting up he supported his head with his hands as children with caries of the cervical spine often do. A leather support was supplied. No suppuration occurred while he was in the hospital, where he stayed for about five weeks. This case was in all its features so exactly similar to cases of caries of the spine in young persons that I think there could be no reasonable doubt as to its nature. In the last year I have met with a case of disease of the sacro-iliac joint in a man aged fifty-four, in connexion with which a large abscess formed and burst, leaving a freely discharging sinus: and I know of another case in which the patient, a man aged fifty-five, died of exhaustion following disease of this joint attended with profuse suppuration.

In senile tuberculosis of the small bones of the hand and foot, and of the testis, the appearances are very similar to those which characterise tubercular disease of these parts in young subjects. There are the development of swelling arising without obvious cause or after injury, and its steady though slow and often painless increase, the infiltration and dusky tint of the skin, the formation of matter escaping through sinuses which usually show little or no tendency to heal, and, later, the thinning, undermining, and retraction of the skin, so that more or less extensive ulceration results. In the course of last year I saw in the out-patients' room two men, one aged sixty-six and the other seventy-two, with senile tuberculosis of the testis. In the first only one testis was affected, in the other both. In both the epididymis was enlarged, hard, and rugged, the skin was dusky and adherent, and suppuration had taken place. In the one the disease quieted down by rest and careful dressing, though when the patient was last seen a small sinus was still discharging and the epididymis was still large and hard. In the other the disease was advancing when the patient was last seen, but I am not aware how the case ended.

I do not know whether I am correct, but my impression is that senile tuberculosis of the lymphatic glands is rare. I have seen it going on to suppuration in the neck in two cases, but these two are all I can remember. Mr. Kiallmark, however, informs me that ten years ago a lady aged sixty-five had a mass of enlarged glands in the axilla, which had suppurated and led to the formation of several sinuses. The disease had been regarded by two surgeons as carcinoma. Mr. Kiallmark, however, considered that the affection was tubercular, and in this view he was confirmed by Sir James Paget. Under treatment the patient made a good recovery, and is still in good health. Disease of the lymphatics calls for no detailed description, for it is, though perhaps more chronic, generally identical in its characters and its course with the like affection in young subjects. That the lymphatics may become widely involved as the result of joint disease, just as they may in hip disease in earlier periods of life, is well shown in one of the cases related above.

The most material part of the subject of senile tuberculosis from a clinical point of view is the diagnosis of the affection in the different forms in which it may present itself. This may, as I have said, be attended with great difficulty—indeed, in the early stage of the affection it may be almost impossible. In the spine and the joints it will be a question between this disease and some form of osteo-arthritis. At first the symptoms may afford no reliable clue, and the surgeon, while trusting to general probability, and therefore anticipating that the case will prove to be osteo-arthritis, will yet do well to remember that, after all, it may be senile tuberculosis, and be ready to take note of any further indications that may present themselves. In the case of the spine, the development of angular curvature would of course point almost conclusively to tuberculosis. This symptom was well marked in the case recorded by Sir James Paget. It would be available, however, only in the dorsal and lumbar regions. In the cervical region senile equally with earlier tuberculosis produces deformity, but the deformity is not characteristic. It may consist of alteration of the axis of the column in a direction either forwards or laterally, or obliquely between these two; but the same deflection may occur in old people from osteo-arthritis, and also from muscular and ligamentous degeneration. I occasionally see a man of seventy-four with paralysis agitans, whose chin rests on his sternum, and whose cervical spine has such an abrupt bend forwards that it presents all the appearances of an angular curvature involving two or three vertebræ. Even angular curvature in the dorsal or lumbar region must not be regarded as an absolutely conclusive proof of the existence of tuberculosis, for I know of a case in which a well-marked angular curvature in the middle of the dorsal region followed cancerous deposit in the vertebræ, secondary to scirrhus of the mammary gland. Pain is no trustworthy guide. It is sometimes very severe—it was so from the first in one of the hip cases related above, and also in the knee case first related,—but more commonly it is only slight; while sometimes, as in tubercular disease in the young, it is entirely absent. Swelling varies in its amount. In some cases of senile tuberculosis of the knee, elbow, and wrist it is slight; but in others it is much more marked than it usually is in the early period of osteo-arthritis, and is due to pulpy thickening of the synovial membrane exactly resembling that which is so commonly present in younger subjects. It has seemed to me that this is a symptom upon which some stress may be laid. Stiffness, when tested by manipulation, is sometimes in senile tuberculosis much more marked than in the early stage of osteo-arthritis, but in the knee case movement was but little restricted. Two important symptoms of senile tuberculosis, absent in osteo-arthritis, are dusky congestion of the skin and increase of the temperature of the part. The one event, however, which may be regarded as very nearly conclusive is the occurrence of suppuration. Suppuration, as a rule, occurs in senile tuberculosis, and generally it occurs somewhat early; while in osteo-arthritis it is of course exceedingly rare. I do not remember to have seen an instance of it. In two of the cases of senile tuberculosis of the hip-joint, and in that of the knee which I have related, it was mainly on the presence of suppuration that the diagnosis was based.

In cases in which the lymphatic glands are the structures affected, the diagnosis will usually lie between senile tuberculosis and malignant disease. Here, again, the occurrence of suppuration would point very strongly to the former condition, but it would not be conclusive, for, rare as it certainly is, suppuration may be met with as a complication of malignant disease. This is well illustrated in a case which I recorded in the St. Bartholomew's Hospital Reports, vol. xxiii. A man aged seventy-three had enlargement of several of the cervical glands. They were about the size of walnuts, were covered with dusky and inflamed skin, and were suppurating freely. At first sight they had every appearance of being the seat of senile tuberculosis, except that they were extremely hard. They proved, however, to be undoubtedly malignant. In some cases family history, either of tuberculosis on the one hand, or of osteo-arthritis on the other, might be so strong that some weight might be attached to it; but family history is usually no safe guide. The presence of phthisis in the lungs, however, would, as it did in one of my cases of hip disease, and in the knee case, point strongly to tuberculosis.

I have little to say in regard to prognosis and treatment. Prognosis is usually unfavourable. The disease shows a strong tendency to advance and extend. In three out of

the four cases of hip disease it steadily progressed, and in two proved fatal. Amputation has been ultimately necessary in the majority of cases of the knee and wrist. It will be noticed, however, that the woman whose hip I brought from the College recovered from very extensive disease, attended with the formation of sinuses. Sir James Paget's case of spinal disease also recovered. As to treatment, rest must, as in young subjects, be provided. The general health must be, as far as possible, maintained. Should suppuration occur, matter must be evacuated at once, the greatest possible care being taken to prevent sepsis. Should the disease continue to advance, amputation may become unavoidable. This operation, if resorted to early enough, will, so far as I have seen, be followed by a favourable healing of the wound.

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CHANCRE OF THE LIP.

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Two cases of chancre of the lip which came under my care led me to make this abstract from the literature of the subject. Chancre of the lip may occur at any time of life, from infancy to old age; it is found in every condition of life, and under every possible variety of circumstances. The accidents which cause it are so many and so curious that no story is too improbable to be true; nothing is more strange than the facts in some of these cases, where the poison has been "ricochetting" among the members of a family or the workmen at a factory. It has fifty ways of gaining an entrance; the list is too long to be given here of all the instruments, implements, and things in daily use that have served to carry it. Probably the chancres thus caused are almost equal in number to those that are due to immediate infection by kissing, by suckling with a syphilitic breast, by such methods as these, and by unnatural practices.

Chancre of the lip is far the most common of all the extra-genital or erratic chancres. Thus, Mason found that of 37 cases of erratic chancre, 11 were cases of chancre of the lip; Laverque found 10 out of 27, Lavallée 16 out of 45, Bulkley 30 out of 65, Ricord 12 out of 29, Neumann 54 out of 84, and Pospelow 49 out of 198; Nivet, out of 581, found 412 on the face; and Tschistiakoff has collected 897 cases of erratic chancre, of which 391 were on the lip. As regards the proportion of chancres of the lip to chancres of the generative organs, it varies much, according to the class of cases to be considered. Thus Petersen of St. Petersburg had in seven years 1208 cases of primary syphilis in men. In only 23 was the chancre erratic, and in 11 of these it was on the lip. Sigmund of Vienna in seven years saw 73 cases of chancre of the lip, of which 32 were hospital patients and 41 private. Mauriac collected 1773 cases of primary syphilis in men. In 76 the chancre was erratic, and in 36 of these it was on the lip. Wirpscha, in ten years' work in a Russian hospital, saw 5147 cases of primary syphilis, in 249 of which the sore was erratic. Professor Ge of Kazan puts the proportion of extra-genital to genital chancres at 3·8 per cent. in man and 18·9 per cent. in woman. Bogolubow of Kronstadt saw 753 cases of primary syphilis. In only 4 of these was the chancre extra-genital, 2 of them being on the lip. Fournier, in twenty-seven years of private practice alone, saw 887 cases of primary syphilis in women. Of these, in 42 the chancre was extra-genital. Ricord, in 471 cases, found 29 extra-genital. But the most appalling statements are made as to some parts of Russia. Petersen is reported to have said, in 1888, that in the villages in the interior of Russia extra-genital infection occurs in 75 per cent. of the cases of syphilis, and is especially common among children. Pospelow, writing in 1889, says that in Kursk extra-genital infection occurs in 85 per cent. of the cases of syphilis, and in Wladimir in 91·3 per cent. (this includes 7·7 per cent. of hereditary cases), and that infection took place by the mouth in 63·9 per cent. of these. Ssabinin is reported to have said, at a medical congress in Russia in 1887, that of 865 cases of syphilis, 201 came of sexual intercourse, 219 were hereditary, and 445 came of herding together and using the things of daily life in common—e.g., all eating from one bowl, and passing one wooden ladle from mouth to mouth.

I know of no other figures so bad as these; but isolated instances in other countries have been published, where the poison has gone to one after another in a family, and bad outbreaks used to occur among glass-blowers, who pass their hot rough iron blowpipes from mouth to mouth. Dechaux gives an account of ten men thus infected by one man, who carried his disease (syphilitic caries of the nasal bones) from one glass-works to another. Attempts were made to get the men to use each a mouthpiece of his own, but they would not give the time to do this. Guinard, a factory surgeon at Rive-de-Gier, stamped out an outbreak by making regular monthly examinations of the men's mouths. Sigmund, writing in 1863, observed that there had lately been a run of cases of chancre of the lip at Vienna, and in 1868 he said again that these cases are on the increase. In 1850 there was a kind of panic in Vienna, and all secondary sores of the lips were popularly ascribed to direct infection, supposed to come from cigars. There is no evidence that I can find that either cigars or cigarettes have ever been infected at the tobacco factories; indeed, from the cleanliness demanded of the workpeople, and from the nature of the process, such a thing is not possible. Of course the use of another man's pipe or cigar end has in many cases been the cause of syphilis.

As regards the condition of the lip at the moment of inoculation, there is no reason to doubt that in most cases there is nothing amiss with it. But sometimes the poison takes advantage of an old crack or fissure, such as is very common, especially in winter, on either lip, especially the lower. Mr. Cooper gives a case where a crack of ten years' duration became the seat of a chancre. Similar cases are recorded by other English surgeons; and Pospelow says that out of forty-nine chancres of the lip a large number had begun in a simple fissure. Or there may be a scratch or a cut on the lip at the time of infection. In one case a bite was the cause; in another a man scratched his lip a few hours before it was exposed to infection; in another a child fell and cut her lip, and was infected by the kiss given to stop her crying. Vidal saw a chancre imposed on a chronic eczema of the lip in a young girl. Girode saw a chancre of the lip in a match-maker who was suffering from phosphorus necrosis with ulceration of the gums.

Coincident chancres of the lip and of the generative organs, the finger, or the nipple have been recorded. Roussel saw an infant with chancres of the lip and perineum. Sigmund saw seven cases of coincident chancres of the lip and tongue. In a few cases there have been two chancres on the lip, or one on each lip.

It may be well to take first the cases of chancre of the lip in children, for they are in some ways apart from the rest; and if such a case be not read aright, wrong judgments and false accusations will come of it. Thus, in one case, an infant was said to have been syphilised by vaccination, but it had a chancre at the corner of its mouth, and both of its nurses were found to be syphilitic. In another similar case the infection came not from the nurse's nipple, but from an accidental chancre on her finger. Often the chancre is overlooked, and then the disease is called hereditary. Infants are infected not only by a kiss, or from a syphilitic nipple, but also by the habit of nurses of first putting into their own mouths the toys that infants suck. Bryant had two cases of chancre of the lower lip in boys of seven; Laverque saw it in a child of three and a boy of twelve. Roussel gives seven good cases in infants and young children. These are but a few instances of what is probably not a rare complaint. Pellizzari says, "Perhaps not one case in ten comes to the notice of a doctor." In infants, he says, a chancre of the lip is a superficial lesion, which soon disappears; it is to the peculiar enlargement of the lymphatic glands that we must look, to make sure of our diagnosis. It seems certain that in infants a chancre of the lip may lack that induration which is its mark in later life. Thus Lavallée gives the case of a mother who got a chancre of the nipple by nursing a strange child, and in this way infected her own infant; but no sure signs of a chancre were ever seen on her child's mouth. Rollet, in 1859, writes: "I have tried in vain to find a case of hard chancre of the mouth in infancy. It is infinitely hard to find it on the lips or tongues of infants at the breast, though mucous patches and plaques are very common. Moreover, it is only in a few cases that you find the lymphatic glands

enlarged." He is so sure of this statement that he invents a theory to explain it. But induration of the sore and enlargement of the glands are noted in more than one of Roussel's cases, aged one and a half to three years; and enlargement of the glands occurred even in an infant at the breast. In Baum's case, a child four years and a half old, the sore was as hard as cartilage, and there was great enlargement of the submaxillary and cervical glands.

As regards the later stages of syphilis thus acquired in infancy, it is said by Roussel that, as a rule, it is not severe; whereas in nurses who are infected by suckling syphilitic infants, the later stages of the disease are usually of marked severity. Pellizzari, who gives a list of sixty-nine nurses thus diseased—"a long list of martyrs,"—is of the same opinion. One of them, in spite of careful treatment, fought for six years against repeated outbursts of the disease, and died exhausted, yet free from visceral disease. Plummert gives two cases of nurses who were attacked by tertiary syphilis within a few months of infection. It may be that the severity of the disease in nurses thus subjected to it is due to their health and strength being depressed at the time of infection.

We come now to chancre of the lip in adults. It is most common in the years between twenty and forty. As to its frequency in England, we have the statement of Mr. Cripps, at the Medical Society in 1887, that about 40 cases had attended at St. Bartholomew's Hospital during the past year. In Paris, at the Hôpital St. Louis, in three recent years there were 27, 49, and 45 cases respectively. The question whether it is more common in men than in women is answered differently by different writers. Most of them say the latter. Neumann found it in 21 men and 33 women; Pospelow found it in 40 men and 64 women; Sigmund in 17 men and 56 women; and Wirpscha in 50 men, 99 women, and 100 children. Bumstead and Taylor, on the other hand, put it at 471 men to 130 women. The question whether it is more common on the upper lip than on the lower is of no practical interest, nor can it be answered. Neumann found 18 on the upper lip, 28 on the lower, and 8 at one corner of the mouth; Pospelow, Ricord, and Puché found it more often on the upper lip; Sigmund saw 39 on the upper lip, 16 on the lower, 12 involving both lips, and 4 at one corner of the mouth.

Chancre of the lip in adults does not come to the notice of the surgeon till it is well advanced. Like chancres elsewhere, it may manifest itself, says Sigmund, either by increased growth, as a lump, or by destruction of the tissues, as an ulcer. In the first case it begins as a mere scaly patch of epithelium, with slight swelling of the corium; its surface is more or less fissured, and the fissures may bleed. Thus a scab is formed of epithelial débris mixed with serum and blood, whitish, yellow, or dark, thin or thick, equal in size and shape to the sore beneath it, and in most cases firmly adhering to it. The sore is indurated, and this induration may be superficial, involving only the skin and subcutaneous tissue, or it may go deeper. After a time the swelling increases, the scab becomes loose, and the corium is exposed, with its surface rough with flakes of epithelium and dried discharge. New epithelium is slowly formed round the sore; but it is smooth, thin, and weak, falling off from time to time so long as any swelling and induration remain in the sore. Only after many failures does it at last succeed in healing the sore, leaving the lip sound and smooth without a scar. The second kind of sore, where there is loss of substance, is less common; it owes its ulceration, for the most part, to causes other than itself. At or near the time of inoculation there was a scratch, crack, or ulcer on the lip; or the sore was made worse by smoking, or by the use of caustics, or by neglect and want of cleanliness, or by the rubbing of a tooth. Bad air, bad food, and a bad state of health may have the same result, bringing about a loss of substance and a purulent discharge; but this discharge is not profuse or obstinate, save in those who are utterly unhealthy. Or the sore may become the seat of phagedænic ulceration. The progress of the sore is slow, especially in elderly people. Ricord thinks that the natural tension of the lip interferes with the healing process. The induration usually takes some months to disappear. He believes that he has seen traces of it after nine years in one case and after thirty years in another. There is a scar, "or, rather, a characteristic stain, a special mark of the disease; a round, brownish, dull, bronzed patch, very slow to change." This fades at last, leaving a faint white mark, or no visible trace of any kind.

Pospelow says of his cases that the chancres varied in size from a split pea to that of a five-mark piece. In shape they were most of them round or oval; some were linear, at right angles to the long axis of the lip; a few were set obliquely on the lip, or were irregular in outline. The linear chancres probably started in simple fissures of the lip. Some of the chancres were raised, some flat, some excavated. There was in every case well-marked induration; in one only is it said that this was not found. In a few cases it was only superficial, like a thin disc of parchment. The sores were usually painful on pressure, or in such movements as were caused by the taking of food.

Ricord (1858) says: "The period of incubation is very variable. If the lip is predisposed for inoculation by a wound, crack, or abrasion, however slight, the chancre appears all the sooner; and in one such case it showed itself in forty-eight hours. Its first appearance may be as a little wound, linear or circular; or it may begin as a pustule. A chancre inside the mouth always tends to ulceration; chancre of the lip seldom goes on to deep ulceration. If it occurs at the corner of the mouth it is usually divided transversely by a deep ulcerated crack." As regards the earliest aspect of a chancre of the lip, from the patient's account it seems that what is first noticed is a papule, pustule, or fissure. In a case published by Mr. Sheild a chancre near the angle of the mouth in a woman of thirty-two began as a "small pimple like a gnat-bite." In a case of Ricord's where the lip was scratched just before inoculation, it began as a white vesicle with a red halo. If it starts in an old fissure, nothing more is observed at first than a slight glazing and hardening of the edges of the crack, which may now be a little painful.

If a chancre, or part of a chancre, be on the inner aspect of the lip, warm, moist, and sheltered, it remains smooth or eroded, and no scab forms on it; it is less raised, or almost flat, or hollow. Pospelow notes that in cases where the sore lay in this way, more or less within the cavity of the mouth, it was just like a mucous tubercle. In Mr. Cooper's case, where a lower lip, cracked for many years, got poisoned from a dirty glass, the crack became glazed and hard, especially along its lower half; and a week later, on the inner aspect of the lip, there was a typical mucous patch, which joined the original sore just where the lips touch. "The contrast between the almost dry and glazed appearance of the lesion on the part of the lip exposed to the air, and the opaline moist appearance of that within the mouth, was very striking." So, too, if such chancres ulcerate, the ulceration is likely to be more extensive towards the inner aspect of the lip.

The lymphatic glands in chancre of the lip are of supreme importance for diagnosis; they are a constant and conspicuous sign of the disease, a token that is never wanting and never doubtful. Their enlargement takes place within three weeks of the first appearance of the sore, and in most cases within a fortnight. After the submaxillary, the cervical, and even the axillary glands may suffer. In chancre of the lower lip the glands beneath the chin are often enlarged. The deep glands escape, or are less enlarged in chancre of the lip than they are in chancre of the tonsil. The enlarged glands may attain a great size, and may form a lump almost as large as one's fist. One or more lymphatics have been felt in a few cases, as thick hard cords passing from the sore towards the glands; and in such cases the enlargement of the glands themselves may be but slight. In feeble persons, or if the sore is inflamed, the glands may be painful, may become acutely inflamed, and may even go on to suppuration. Besnier had a case where erysipelas of the face started in a chancre of the lip. When it subsided, the œdema and ulceration of the lip were found cured, and the sore itself was much smaller; but the glands suppurated. Save for such accidents as these, the glands remain painless and indolent. They have the feel of syphilitic and not of cancerous glands; though they may be "as hard as wood," yet they are not "as hard as stone"; they still feel like glands, and not like the ill-defined adherent infiltrating growth of cancer; the skin is free above them; they are not matted together and wedged in among the deeper structures; they remain distinct and loose long after they have become so large that if they were cancerous they would be firmly fixed to everything round them. They are best felt by hooking one's finger up behind them, so that they lie in front of it; then they feel like

marbles in a bag, or "like nuts in a monkey's cheek." Sometimes one or two glands may far exceed the rest in size. If the general glandular enlargement of constitutional syphilis be well marked, the submaxillary glands will yet excel both in size and in hardness. They are, indeed, one of the surest and safest guides in diagnosis; and when once their hardness and enlargement are well established the case must be treated without delay.

As regards the further course of the sore itself, and the size to which it may attain if it be neglected, Mr. Hutchinson, in his "Archives of Surgery" for October last, has figured the largest one of all that he has seen; it occurred in a young lady, and invaded the whole upper lip. Other cases as bad as this have been recorded by other writers. As to the amount of inflammation in and around the sore, and throughout the rest of the lip, it varies according as the sore has been kept clean and quiet, or has been scratched or irritated. In a case of my own, in a young girl, who had been treated for three months with various lotions, the sore was large, raised, and inflamed, with a thick, dark scab, and the whole lip was red, stiff, and greatly swollen. This general swelling of the lip may reach an enormous size, and give much pain; it may not wholly subside for a couple of years. Such are the cases of "œdema indurativum," "œdème dur scléreux," "sclerotic œdema;" of late years a special organism (streptococcus) has been found in great quantities in the infiltrated tissues.

As regards the prognosis in chancre of the lip, the disease will probably run its usual course, neither more nor less. Neumann, speaking of eighty-four extra-genital chancres, fifty-four of which were on the lips, says: "The disease and its results were in no way modified by the unusual method of propagation." Sigmund says of his seventy-three cases: "There is nothing special to say as to the course and close of the disease in these cases. I observed forty-four of them for a long time without seeing them deviate from the ordinary way of syphilis. The old idea that the attack is milder if the sore is extra-genital, is certainly false as regards either a chancre on the finger or a chancre on the lip." In England the "old idea" is not that the attack will be milder, but that it will be more severe. Mr. Hutchinson, though he shows that the site of inoculation cannot affect the action of the poison, points out that neglect of treatment in chancre of the lip will result in an aggravation of the rash; and perhaps this may explain the apparent gravity of these cases. Again, Baum has suggested that some erratic chancres may, from the accident of their position, resist absorption, and thus a copious rash may coincide with a still large and indurated chancre, making things seem worse than they really are. Again, the position of a large chancre of the lip, half inside the mouth, must favour the absorption of syphilitic discharge into the stomach; and it is said that the most severe and obstinate forms of secondary and tertiary syphilis are found in those patients who have had, or still have, extensive ulceration of the fauces. And if Fournier's rule be true, that extensive ulceration of a chancre tends to be followed by a worse rash, this also will apply to ulcerated chancres of the lip. Thus there are reasons—some real, some only apparent—for the belief that a chancre of the lip will be followed by syphilis of at least an average severity, and probably rather above than below the average.

There is another "old idea" which may here be mentioned. It is the non-occurrence of erratic soft sores on the face—a great theme for discussion among the older pathologists, when as yet the distinction between infecting and non-infecting sores was not universally received. Ricord says: "I have now shown you a great number of cases of erratic soft sore in many different parts of the body; everywhere, indeed, save only on the head and face. My colleagues have not been more fortunate than myself. If we search the statistics, French and foreign, we find only two cases of soft sore on the lip, and both of these are doubtful. I believe that it ought to exist; I long to find it; but there is not one clear case of soft sore of the face." Fournier, in 1858, collected 150 cases of primary venereal sores on the head and face, but they were all hard chancres save five, and these five were all doubtful. Of course the soft sore can be produced anywhere by deliberate inoculation. Puché and Rollet thus produced it on the head or face in twenty cases; Bassereau, Huebbenet, and Robert also produced it on the lips and elsewhere on the face in many cases. But the records of true accidental inoculation of it on the face are rare and uncertain. One case that Fournier reports may be a real instance of it. Puché also reports a case of a sore on the lower lip, which had all the characters of a soft sore, and was reproduced elsewhere by inoculations; and Bryant published a case of "soft chancre" of the corner of the mouth, with inflamed glands, in a girl of seventeen; but these three cases are all that I can find. As regards the frequency of erratic soft sores in general, Fournier, out of 445 cases of soft sores, had only three or four where the sore was erratic; and Debauge, in 206 similar cases, had not one case of erratic soft sore. But the whole question must remain uncertain, in view of the character of the soft sore, and of its misleading likeness to tuberculous ulceration.

The diagnosis and treatment of chancre of the lip remain to be considered. Besides the use of mercury, the sore must be firmly covered, and the patient must be told in strong language that he is a constant source of danger to all about him. Sigmund recommends that the sore be cleansed with sublimate lotion and covered with mercurial plaster. As to diagnosis, one of two mistakes may be made. Either the chancre is taken for a simple swelling, or boil, or inflamed spot in the lip, and is neglected; or it is taken for cancer, and is excised. Records of the first mistake are too frequent to be quoted here. The second mistake is well illustrated by two cases published by Mr. Quain in 1859: "After a good deal of examination and consultation upon each of these cases, the tumours were removed." Mason gives three cases, all of which were first diagnosed as cases of cancer. Moreover, he gives the case of a man of twenty-six, who was three times within two months subjected to operation for a chancre of the lip.

Chancre of the lip is commonest in the young and middle-aged; as common on the upper as on the lower lip; and as common in women as in men. Chancre is rapid; its scab is often dark and rupial; the lip is often red, swollen, and stiff; it is seldom destructive, painful, or fetid. The glands in chancre swell in a few days; they rapidly attain a great size, yet are still loose, movable, distinct, true amygdaloid glands. Mercury will put an end to doubt. The microscope has been used with success; in two cases a suspicious sore was thus shown to be only the infiltrated granulation tissue of a chancre. But the surest guide of all in a doubtful case is the state of the glands.

Wimpole-street, W.

REMARKS ON SO-CALLED VILLOUS DUCT CANCERS OF THE FEMALE BREAST.[1]

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No chapter in the history of mammary neoplasms is more obscure than that which refers to the so-called villous duct cancers. This is strikingly exemplified by the many designations applied to them by different observers. It may be worth while to reproduce some of these, since they doubtlessly indicate, however imperfectly, varied aspects of the morbid process. They have been described by Brodie as "sero-cystic tumours," by Billroth as "tubular cyst-adenomas," by Gross as "true adenomas," by Labbé as "epithelioma intra-canaliculaire," by Rindfleisch as "glandular cancroids," by Cornil and Ranvier as "carcinôme villeux"; while others have given them such names as "duct papilloma," "papillary endo-canalicular fibroma," "cystic adenoma," "blood cyst," "épithéliôme cylindrique," "épithéliôme kystique," "épithéliôme polykystique," "villous duct epithelioma," "hæmorrhagic carcinoma," "duct cancer," "tubular carcinoma," &c. What confusion all this implies! Yet there is no lack of facts; the problem rather is to set these in order and to interpret them aright. To this end I think the first and most important step is the recognition of the fact that under this term "villous cancer," as commonly employed, at least two perfectly distinct kinds of neoplasm are included—viz., the non-malignant villous papilloma and the malignant tubular cancer.

I will now proceed to sketch briefly the salient features of

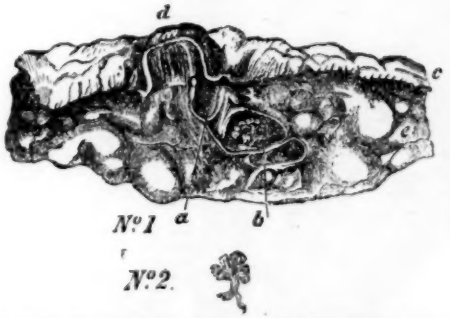
[1] A paper read before the Preston Medico-Ethical Society on March 9th, 1892.

each of these varieties, basing my remarks on the study of thirty-six cases, some of which have come under my own observation.

I. VILLOUS PAPILLOMA.

Villous papillomata of the breast may be either single or multiple. They may arise from any part of the mammary duct system, but hardly ever from the acini. The galactophorous ducts are their favourite seats, especially the lacteal sinuses. (See Fig. 1.) In its simplest form the disease presents as a soft, granulated or shaggy, pea-sized, solitary outgrowth of reddish or purplish colour, connected by a slender stalk with the wall of the duct whence it originates, as in cases by Barker, Bryant, Bowlby, Pollard, and others. When such a growth is floated in water, its branching, arborescent structure at once becomes apparent. Its delicate villosities, which are often of extreme complexity, are of course easily lacerated; and as they contain large capillary blood-vessels, ecchymoses and hæmorrhages frequently result. Their prevalent dark colouration is ascribable to this, and it has often caused them to be mistaken for blood-clots, and even for melanosis. On careful dissection it is easily determined that the cavity within which the papilloma is contained is the dilated duct itself, and the fluid contents are derived from its lining membrane. These may be either serous, mucoid, or pultaceous, and they are often blood-stained; they may contain epithelial cells in granulo-fatty degeneration, corpuscles of Glüge, leuco-

FIG. 1.



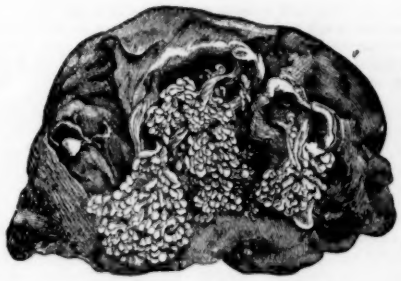
Solitary villous papilloma. No. 1. Section through centre of nipple of right breast, showing dilated ducts and a duct papilloma projecting into one of them. *a*, Dilated duct. *b*, Papilloma. *c*, Skin. *d*, Nipple. *e*, Breast tissue.—No. 2. Vertical section through the raspberry-like papilloma of No. 1. It is seen to be made up of four main lobes, each of them divisible into smaller leaflets. (Barker.)

cytes, granular débris, cholesterine scales, blood-corpuscles, &c., as well as dissolved albumen. These neoplasms present as circumscribed tumours of ovoid or conoid shape, with their long axes parallel to the main ducts. They are usually centrally situated beneath the nipple or areola. Though connected with the breast itself, they seldom adhere to other adjacent structures. They cause no retraction of the nipple or of the overlying skin; but these parts are sometimes dragged upon. The tumours feel firm, elastic or fluctuating, but they seldom attain large size, the majority being like filberts or walnuts. Their peripheral villosities occasionally protrude through the dilated galactophorous ducts at the summit of the nipple, where they form red granular excrescences.

More common than these solitary papillomata are the multiple ones (Fig. 2), of which cases have been recorded by Billroth, Pollard, Labbé, Robinson, and others. These may be confined to the ducts of several adjacent lobules, or to those of an entire lobe, or they may be scattered irregularly throughout the ducts of the whole gland. Under these circumstances firm, irregular, nodular tumours are produced, which often attain considerable size. On section numerous small cystic cavities are noticeable, within which the villous growths are contained; when the latter grow freely they sometimes cause absorption of the intervening cyst walls, the result being a softish mass of coalesced villous growths, which on section presents a spongoid appearance, its meshes containing pultaceous or mucoid fluid, derived from the cells lining the closely packed villosities. In these cases there is often no distinct capsule, and the bulging intra-canalicular growths may even seem to infiltrate the surrounding fibro-fatty structures.

Microscopical examination of mammary papillomata shows them to be composed of a slender framework of fibrous connective tissue, lined by one or more layers of columnar or subcolumnar epithelium. (Figs. 3 and 4.) In this fibrous framework very few, if any, cellular elements can be detected. It serves the purpose of supporting the capillary bloodvessels. In some instances this epithelial investment is exceedingly thick; upwards of twenty layers of cells have been counted. Under these circumstances the more superficial cells lose their columnar form and undergo granulo-fatty changes. Cells similar to those which cover

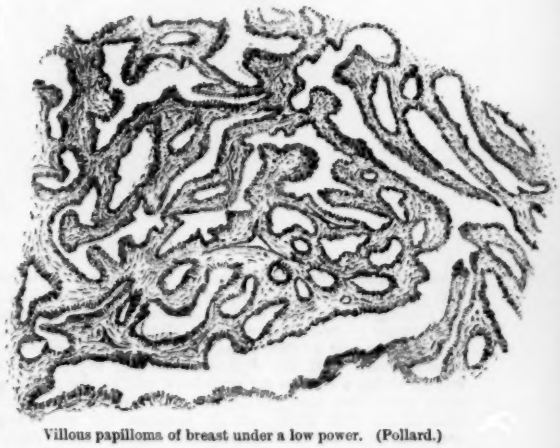
FIG. 2.



Multiple villous papilloma. (Gross.)

the free surface of the neoplasm line also the wall of its containing cyst. In their microscopic appearances such growths occasionally present some resemblance to alveolar cancer, for certain sections show ovoid spaces containing epithelial cells surrounded by scanty fibrous stroma. These cells, however, differ from cancer cells in that they are of the columnar type, and, instead of being irregularly massed within the alveolar spaces, they are regularly arranged round their walls. The alveolar appearance is produced by cross sections of the epithelial-lined, interpapillary depressions, between the closely packed ramifications of the neoplasm. In certain cases, when the villosities are lined with

FIG. 3.



Villous papilloma of breast under a low power. (Pollard.)

but a single layer of epithelium, a tubular appearance is thus produced.

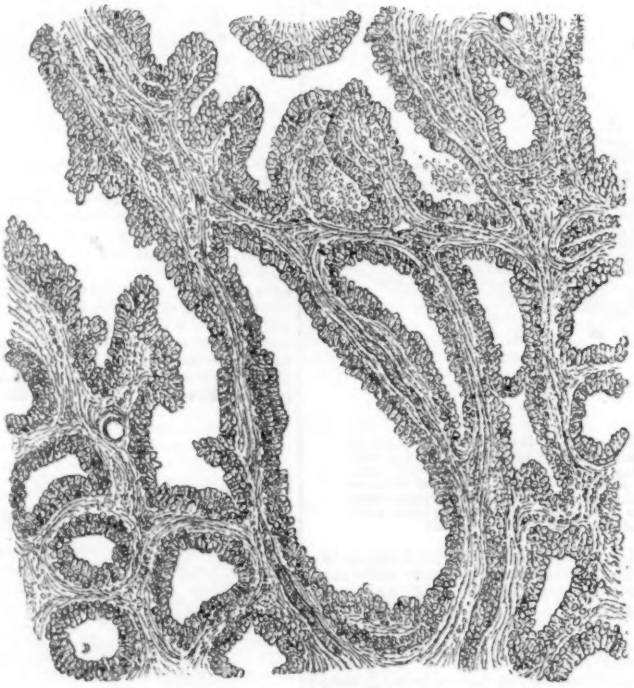
In the initial stage of their development villous growths present as simple conical or forked outgrowths of the lining membrane of the duct. In this condition such growths are occasionally met with in the ducts in the vicinity of the fully developed growths. Further proof of their origin from this source is to be found in the fact that the cells lining their free surfaces are invariably of the same columnar type

as those of the originating ducts. Labbé[2] has recorded a case of multiple villous papillomata in which the free surfaces of the neoplasms and of the containing cyst walls were lined throughout with flattened epithelium. Here the disease was probably of intra-acinous origin. This is the only case of the kind with which I am acquainted.

It will be gathered from the foregoing description that these growths are of a perfectly innocent nature, though often multiple; they have no tendency to local infection, nor do they ever disseminate in the adjacent lymphatic glands or in the system at large, and when completely removed they never recur. Of the patients in my list one was known to be alive and well fourteen years after operation, and others six, three and a half, and three (two cases) years. In a few cases growths of this kind have been found associated with ordinary fibro-adenomata.

Usually the first symptom of villous papilloma to attract attention is the presence of a fluid discharge from the nipple, which persists, and after a time becomes sanious. Even when this is not the initial symptom it generally appears at an early date, and remains throughout a salient feature. In other cases a small pea-sized tumour is the thing first noticed. The presence of a tumour is, however, often overlooked by the patient, as it seldom causes pain or other inconvenience. The disease progresses slowly and almost imperceptibly, so that a surgeon is seldom consulted until it has existed for several years. Of the eighteen cases in my list it was known to have existed for periods of twelve, ten, four, and three years (two cases) before advice was sought. Having maintained this slow rate of increase for some years, these tumours not unfrequently get larger rather rapidly, owing to increase in the fluid contents of the cysts. In two out of my eighteen cases there was history of previous injury; in one the nipple had been severely bitten twenty-two years previously; in the other the disease was first noticed four months after a blow. The patients affected are generally prolific married women, and the right breast is as often the seat of the disease as the left. The average age at onset is forty-three years; the youngest in my list twenty-three, the oldest fifty-five. The numbers for each quinquennial period are as follows:—Twenty to twenty-five years, in 1 case; twenty-five to thirty years, in 1 case; thirty to thirty-five years, in 1 case; thirty-five to forty years, in 5 cases; forty to forty-five years, in 3 cases; forty-five to fifty years, in 2 cases; fifty to fifty-five years, in 2 cases. Villous papillomata therefore develop at a much later period than fibro-adenomata—of which the average age at onset is 30·4 years; but they arise somewhat earlier than cancers, of which the average age at onset is forty-eight years. The disease I have just sketched has hitherto almost invariably been confounded with encephaloid or scirrhous cancer, or sarcoma, and treated like these affections by amputation of the breast, in several cases the axillary glands having been removed as well. It is clearly a mistake to resort to such severe measures when we have to do merely with a solitary villous growth, or even with several such growths confined to a limited area of the gland. In such cases the disease should be excised, together with the containing cyst wall. Several cases illustrate the futility of cutting into these tumours, and of destroying the overlying skin by caustics. The only result of such treatment is to cause them to fungate and to increase rapidly. When the disease is diffuse the whole gland must be extirpated; but even then the overlying skin, including the nipple and areola, may usually be preserved.

FIG. 4.



Villous papilloma of breast under a high power. (Billroth.)

Bibliographical indications.—Labbé and Coyne: Traité des Tumeurs Bénignes du Sein (Paris, 1876), pp. 206, 212, and 264. Th. Billroth: Die Krankheiten der Brustdrüsen in the Deutsche Chirurgie, Lief. 41, 1880, S. 79. A. E. Barker: Brit. Med. Jour., vol. i. 1890, p. 590. S. W. Gross: Am. J. Med. Sci., Oct. 1879, p. 459. B. Pollard: Trans. Path. Soc. Lond., vol. xxxvii., 1886, p. 483. B. Pitts: Ibid., vol. xxxix., 1888, p. 320. H. B. Robinson: Ibid., vol. xl., 1889, p. 285; vol. xli., 1890, p. 221. T. Bryant: Diseases of the Breast, 1887, p. 272. B. C. Brodie: On Sero-cystic Tumours of the Female Breast (Lec. on Path. and Surgery), 1846, p. 137. A. A. Bowlby: St. Bart.'s Hosp. Reps., vol. xxiv., 1888, p. 273. E. W. G. Masterman: Ibid., vol. xxvii., 1891, p. 193.

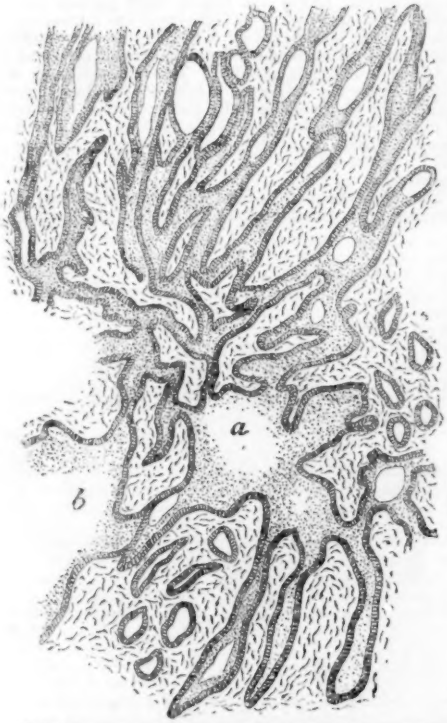
II. TUBULAR CANCER.

The terms "tubular" and "acinous," as applied to mammary cancers, originated with Billroth, but they are used by him in a different sense to what I employ them. According

[2] Traité des Tumeurs Bénignes du Sein, 1876, p. 163.

to my views, the great majority of breast cancers—about 96 per cent.—consist entirely, or almost entirely, of structures of the acinous type, the tubular form being quite a rarity. I regard the ordinary scirrhous or alveolar cancer as morphologically of the former type, the alveoli and their contents roughly representing acini in the resting stage. The latter term I restrict to certain cancers—histologically often very duct-like in appearance,—the true duct cancers. These are often associated with cysts and intra-cystic papillary growths, the latter of which never develop in connexion with acinous (scirrhous) cancers.[3] The concurrent

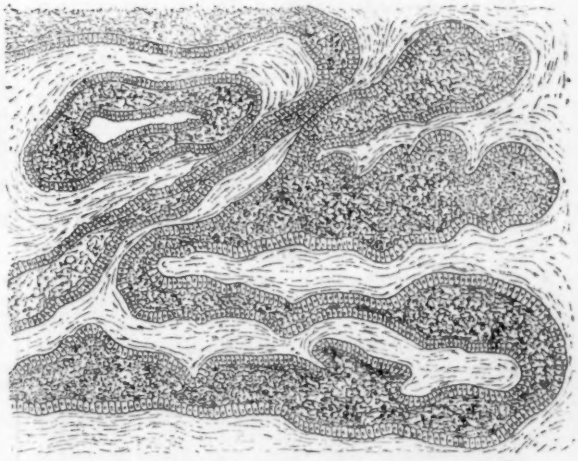
FIG. 5.



Tubular cancer of the breast (hollow form) in longitudinal section, *a*, Dilated duct giving off nine prolongations in the form of tubes lined by columnar epithelium, which anastomose with one another and with similar offshoots from other ducts (*b*). Intertubular connective tissue scanty. × 100. (Gross.)

testimony of recent observers is against Cornil and Ranvier's statement that villous cancer is merely a form of scirrhus accompanied by intra-cystic villous growths. This form of breast cancer is undoubtedly a distinct variety. Histologically it is characterised by the presence of elongated, intercommunicating, cellular processes, growing into the surrounding connective tissue. (Figs. 5 and 6.) These processes have the form either of hollow tubes (Figs. 5, 7, and 8) lined with one or several layers of columnar epithelium; or of solid cellular cylinders (Figs. 6 and 9), of which at least the peripheral cells are of the columnar type. The appearances seen in cross sections are well shown in Figs. 7, 8, and 9. In connexion with these structures, numerous small cysts frequently arise, through granulo-fatty disintegration of their cells; and within the cysts papillary growths often spring up. From the columnar type of their cells, and from the tubular form assumed by the ingrowths, it may be inferred that these neoplasms originate from the mammary ducts. Neoplasms of this kind generally present as hard, nodulated, irregular tumours, which are usually circumscribed, and often more or less completely encapsuled. They vary in size from a hazel nut to a newly born child's head, and commonly they are as large as a hen's egg. They are generally mobile and very seldom do they cause retraction of the nipple, or of the overlying skin. On section we find them composed of firm, whitish—or, in places, pale pinkish—solid substance, formed by the ingrowing epithelial processes, with here and there yellowish areas out of which pultaceous substance, consisting of epithelial cells in granulo-fatty degeneration, may be

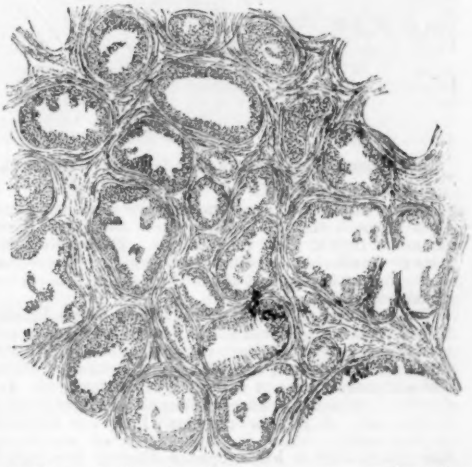
FIG. 6.



Tubular cancer of breast (solid form) in longitudinal section. (Labbé and Coyne.)

squeezed. Embedded in this solid substance are numerous minute cysts. Sometimes the latter are so numerous as to convert the tumour into soft reticular substance. These cysts contain mucoid or pultaceous fluid, and not unfre-

FIG. 7.



Tubular cancer of breast (hollow form) in transverse section, under a low power. (Bryant.)

quently intra-cystic papillary growths. In this connexion ecchymoses and hæmorrhages sometimes arise.

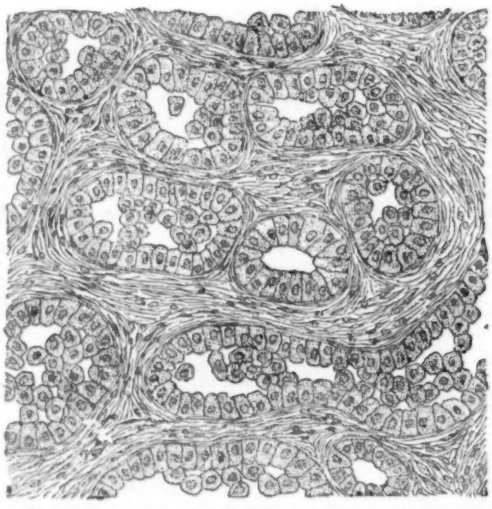
Their clinical history is a matter of great interest. The chief points are these:—They occasionally disseminate in the adjacent structures. In a case recorded by Shattock[4]

[3] In very exceptional cases villous papilloma and acinous cancer may coexist as independent growths in the same mamma. See Mr. Bowlby's paper (No. 2), St. Bart.'s Hosp. Reports, xxiv., 1888, p. 265; and Mr. Hutchinson's Archives of Surgery, vol. ii., No. 6, Oct. 1890, plate xxv., fig. 2.

[4] Trans. Path. Soc. Lond., 1888, p. 324.

nodules of this kind were found adherent to the two upper ribs in a woman aged sixty, who died a few weeks after amputation of the breast for the primary disease. The chief evidence of their malignancy is, however, to be found in the frequency with which they recur locally after removal. This is known to have occurred in eight out of my eighteen cases. The most striking of these is Butlin's. His patient was a married woman, aged sixty-four, the mother of several children. Six months before coming under treatment she first noticed a lump the size of a hazel nut in her left breast. When first seen she had a tumour the size of a bantam's egg, below and external to the left nipple. It was firm, irregular, and not adherent to the overlying skin, neither did it cause retraction of the nipple. The axillary glands were normal. The breast was extirpated, together with the tumour, which was circumscribed and invested with a thin capsule. It was of brownish-black colour and friable consistence. Two years later she returned with a recurrent tumour, the size of a walnut, at the axillary end of the scar. It was freely excised, and presented the same appearance as the primary disease. One year and a half later she came under observation again with several recurrent nodules in the same situation. They were of a year's growth. These were freely excised, together with the surrounding tissues. They presented the same circumscribed outline and brownish-black colour as the former tumours. Two years and nine months later two fresh

FIG. 8.



Tubular cancer of breast (hollow form), in transverse section, under a high power. (Formad.)

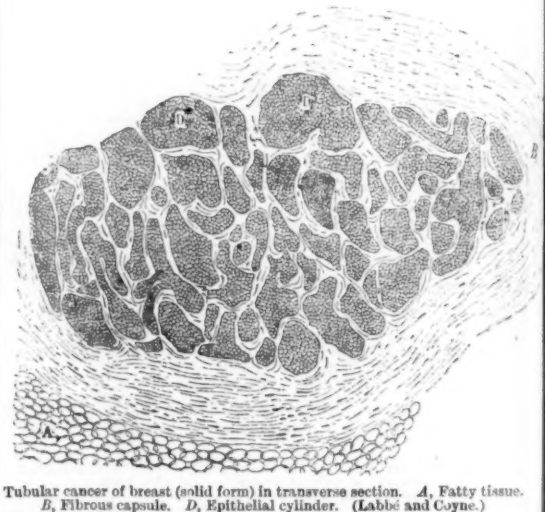
recurrent tumours, of some months' duration, were excised from beneath the old scar. Their structure precisely resembled that of their predecessors. The axillary glands were never affected, nor was there any sign of dissemination of the disease in any part of the body. The general health remained unimpaired.[5]

The adjacent axillary lymph glands are occasionally infected by these neoplasms. This occurred in five out of my eighteen cases. Godlee's is a typical case.[6] His patient was a childless widow, aged sixty-three, who when first seen had a mammary tumour of four months' duration. It was destroyed by caustic. Three or four months later it recurred in the scar. A year later a small lump was first noticed in the axilla, which in the course of another year had grown into a hard rounded tumour two inches in diameter, and the overlying skin was adherent and red. The breast was amputated, and the axillary tumour was dissected out. On dissection, the mammary tumour was found to be enclosed in a dense fibrous capsule, which contained a considerable quantity of solid dark-brown substance, like modified blood-clot, and about two drachms of dark treacle-like blood. The axillary tumour was of similar nature, only it contained less blood. It was described as "an anomalous form of blood cyst." On placing the tumour in water, it was seen to consist of a number of tortuous processes. After hardening it was very friable, and difficult to cut sections off, as these tended to fall to powder. On microscopical examination, there was revealed a scanty fibrillar tissue uniting together a number of tubules, lined by several layers of hexagonal epithelium.

To account for the comparative rarity of lymph gland dissemination, Labbé and Coyne have pointed out that between the proliferating epithelial zone and the nearest lymphatic lacunæ a barrier of thick fibrous tissue exists (Fig. 9), which must be overcome before the cancer cells can gain entrance into the lymphatics. The slowness with which this is overcome indicates, I take it, the low degree of malignancy of the new growth, rather than of the strength of the intervening barrier. Some authors have stated that these neoplasms cause also general systemic dissemination; but I know of no case that can be cited in support of this assertion.

The first symptom of tubular cancer usually is the presence of a small tumour in the central part of the

FIG. 9.



Tubular cancer of breast (solid form) in transverse section. *A*, Fatty tissue. *B*, Fibrous capsule. *D*, Epithelial cylinder. (Labbé and Coyne.)

breast, beneath the nipple or areola. Discharge from the nipple is seldom experienced. Tubular cancers increase much more rapidly than villous papillomas; in less than a year they commonly attain the size of a hen's egg. Occasionally they burst through the overlying skin and fungate. In my list there are four cases of this form of cancer in which tumours had been present for long periods—viz., thirty-six, eighteen, fifteen, and seven years respectively. In each of these cases a small tumour had existed for most of the time—whose increase was almost imperceptible—and then during the last few years it had rapidly attained large size. There are several facts about the history of these cases that make me think we here have to do with tubular cancer supervening on villous papilloma of many years' standing. The following is a typical case by Labbé and Coyne.[7] A well-nourished, healthy-looking woman, aged sixty-seven, four years after her only confinement, which was forty years ago, first noticed a small movable tumour in the inner part of her left breast. She had at this time and for two years subsequently serosanious discharge from the nipple, which then ceased spon-

[5] In answer to a letter of inquiry, Mr. Butlin has kindly informed me that he last saw this patient in June, 1889, two years and a half after the last operation. "She then had a small dark tumour below the scar, towards the axilla, and one or two hard enlarged glands in the axilla."

[6] Trans. Path. Soc. Lond., vol. xxvii. 1876.

[7] Traité des Tumeurs Bénignes du Sein, Paris, 1876, p. 343; for the other cases vide op. cit., p. 352; Gross, Amer. Syst. Gyn., vol. ii., 1890, p. 262.

taneously. After this the tumour got larger, then it remained nearly stationary for thirty-three years. At the end of this time it was the size of a small egg. Soon afterwards, without any obvious cause, it began to increase rapidly, and quickly invaded the whole breast. In the course of three years a hard nodulated tumour, the size of a man's two fists, had developed. The nipple was buried in the growth, but not retracted; nor was the overlying skin adherent. Some of the bosses fluctuated. Nothing is said about the condition of the axillary glands. The diseased part was amputated. On examination after removal, the tumour was found to be encapsuled. In addition to the large lobulations and bosses, its surface was thickly studded with small rounded projections. On section its central part consisted of whitish compact lobular structure, and its periphery was occupied by numerous small cysts containing papillary growths and brownish fluid. Microscopical examination of the solid basis of the tumour showed numerous elongated, tortuous, anastomosing cylinders of epithelial cells growing in scanty fibrous stroma. The peripheral cells of these ingrowing processes were regularly arranged and columnar, those within were of irregular shape, and in various stages of granulo-fatty degeneration.

Tubular cancer supervenes at a much later period of life than villous papilloma, and even than acinous (alveolar) cancer. The average age of my cases at the outset of the disease was 53·5 years; the oldest 65·5, the youngest forty. The numbers for each quinquennial period are as follows: Forty to forty-five years in 4 cases; forty-five to fifty years in 3 cases; fifty to fifty-five years in 2 cases; fifty-five to sixty years in 4 cases; sixty to sixty-five years in 5 cases; sixty-five to seventy years in 1 case. The only treatment of any avail is free amputation of the affected part, as for scirrhous cancer; but the axillary glands need not be interfered with unless obviously diseased.

I only made the acquaintance of Brodie's lecture on "Sero-cystic Tumours of the Female Breast" after the above had been written. He is evidently the first who recognised the true nature of the disease Honour to him! It is, indeed, impossible not to be struck with admiration at the singularly clear and penetrating insight into this obscure disease which this distinguished man had attained, and that without the microscope and other modern aids.

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Preston.

NOTE ON CONCUSSION OF THE SPINAL CORD.

BY J. A. MACDOUGALL, M.D., F.R.C.S. EDIN.,
FORMERLY SURGEON TO THE CUMBERLAND INFIRMARY.

As a small contribution to the literature of concussion of the spinal cord, and as emphasising the interest attaching to such cases as the one that appeared in THE LANCET of Oct. 24th, 1891, p. 928, reported by Mr. Clutton, I think the following worth recording.

A. C——, aged forty, a goods guard, while attending to the lamp attached to the rear of his van, his train being in motion, lost his balance and fell backwards into the ballast way. He had no loss of consciousness, for he at once discovered that his legs were paralysed, and concluded that he had "broken his back." Some hours later he was admitted into the Cumberland Infirmary, and when I saw him I found him to be a tall, muscular, and very intelligent man, making no complaint beyond that of his powerless limbs. On examination of his back there was seen to be in the central line a considerable localised bruising over the lowest dorsal and upper lumbar spines, attended by marked tenderness, but there was no evidence of any injury to the spinal column. This, I need hardly add, was very carefully sought for. His legs were absolutely paralysed. Under his utmost efforts there was no evidence of muscular movement in them. Sensation was distinctly impaired. The bladder was distended and required relief by the catheter, the bowels were constipated, his temperature was subnormal, and his pulse feeble, but quiet. His consciousness and the recollection of his accident were perfect. For two days after his admission there was no evidence of improvement in mobility, but sensation returned somewhat rapidly. On the third day he could move his ankles and toes, and could very feebly and slowly draw up his legs, while the bladder was beginning to regain its expulsive power; and at the end of a week he could, while resting in bed, move his limbs freely, and the use of the catheter was no longer necessary. Sensation was then fully re-established. His temperature, normal on the day following his accident, never rose above 99·4°, and this only for two days.[1] Three weeks after his admission he was allowed out of bed, when it was found that although he could stand firmly, his power of walking was feeble and unsteady. Six weeks after his accident, and when with the aid of a stick he could move about with comparative freedom, he was made an outpatient, his statement then being that walking greatly fatigued him, and that extra effort in this way was always followed by stiffness, weariness, and numbness in the legs. His limbs were, however, not wasted, their muscular tonicity was fairly good and their sensations quite normal. Two months later he ceased his attendance, and when, a year or two afterwards, I had an opportunity of examining him I found him in perfect health, his story being that he was then as vigorous as in his earlier days.

A good many years have passed since then, and the case, at least as regards its completeness, remains with me as a solitary experience. I regarded it—rare as I ventured to believe such cases to be—as one of spinal concussion without simultaneous injury to the spinal column; but what the conditions were that underlay its symptoms remained matter of conjecture. A short time ago, and in quite another field of observation, I believe I found for them a probable explanation, and thus: A good stag was stalked to within eighty yards, and aim was taken at the upper part of his neck. He sank instantly to the shot, and the keeper, running in, divided freely the vessels of the throat. On introducing my finger into the bullet wound I found that it had been placed a little higher than was intended, that it had passed transversely through the muscles of the nape, and that in its passage it had but fractured the upper part of a vertebral spinous process. At once the thought occurred that the sudden collapse of the animal was due to damage to the spinal cord, and I therefore had the parts carefully removed for dissection. On clearing the vertebral column I found one spinous process alone injured, about half of which had been carried away; this, however, so cleanly that there was no marked fissuring of the portion that remained. The body of the injured vertebra was intact, as were those on each side of it, and the ligamentous structures were unharmed. Removal of the laminæ demonstrated more fully the perfect solidity of the column and the fact that there was no effusion without, or injury to the spinal theca. The subarachnoid space was also free, but it was noticed that there was a considerable effusion of blood in the meshes of the pia mater in a direct line with the fractured spinous process. About three inches of the cord were removed for examination, and this was done by the cutting of thin transverse sections. When the portion of it which lay within the body of the damaged vertebra was reached, it was found to be the seat of numerous points of very minute ecchymoses which were scattered through its substance, and that at one or two points there existed disseminated specks of extravasated blood. Its texture was, however, quite firm, and neither under pressure nor when exposed to a stream of water was it found to be markedly softer or more diffluent than the bit of normal cord with which it was compared. Unfortunately,

[1] That no reference is made to the condition of the reflexes is explained by the fact that the case occurred anterior to the published researches of Erb and of Westphal.

the examination was entirely macroscopic, neither a microscope nor the means for preserving and hardening the specimen being available. This is matter for regret, as it is possible that the existing lesions were not confined to the walls of the bloodvessels.

These two cases seem to me to supplement one another, and although it is as a rule unwise to generalise from single examples, we know so much of the symptomatology and of the morbid appearances that indicate cerebral concussion that we could well anticipate similar conditions in a corresponding injury to the spinal cord. In both events the spinal column was subjected to sudden and severe jar, and in both with a very similar and striking result. Admitting that the injury in the instance of the stag was an exceptionally severe one (for the contusing power of a ball travelling at a high rate of velocity is fully recognised), still in the case of A. C—— there were certain circumstances which tended to render the blow he received one of great severity. He fell backwards from a train moving at fair speed in the opposite direction, receiving thus a considerable impulse; and when thus impelled he probably struck, judging from the localised nature of the bruise found, upon a projecting surface. Such conditions must have caused a sudden and severe stroke, and probably produced in him similar lesions to, but slighter than, those found in the stag.

Mr. Page, in his masterly and most valuable work upon "Injuries of the Spine and Spinal Cord," p. 19, refers to a case recorded by Dr. J. Liddell, in which a Minié ball striking a man to the left of the second lumbar vertebra and emerging some inches to the right fractured in its passage its spinous process. Paraplegia and paralysis of the bladder were at once developed, but at the end of two months were being gradually recovered from. In this instance the circumstances which gave rise to the injury were identical with those which occurred in the case of the stag, and I take it that the symptoms developed in the man owed their origin to such lesions in the spinal cord as were found to exist in that of the animal. Here, however, I would state my belief that even in the spinal cord we may have symptoms of a passing "concussion" in which probably the stroke being less severe, the harm actually done is neither so marked nor so grave. My reason for thinking this is that I have known a deer shot in the neck fall instantly and lie apparently dead for some little time, but, when approached, gather itself up with a visible effort and go off at sufficient speed to lead to its escape. In it, I imagine, the ball passed immediately over the spinal column without perhaps actually injuring it, but sufficiently close to communicate to it such a jar as for the time being inhibited the action of the organ it contained. What seems to render this more probable is the fact that a ball striking some other and non-vital part beyond, producing the sound of impact and the flight of the deer, would have afforded no immediate evidence of injury.[2] Even, however, in these lighter shocks—these so-called "concussions"—there is probably always a marked lesion existing. That this is usually so necropsies in fatal cases of cerebral concussion reveal to us, and in these the appearances found are precisely those which I have described as occurring in the spinal cord I examined. They are the coarse evidence of the jar the nervous mass has sustained, and the violence of which, so far as the naked eye carries us, seems to fall largely upon its vascular apparatus. Whether this be due, as Duret holds, to the result of force communicated to the cerebro-spinal fluid and its effects in the peri-vascular spaces, or to the vibratory thrill imparted to the mass itself, matters little; in either case what occurs is an apparently temporary, though happily incomplete, suspension of its essentially vital action. That this is the direct issue of the shake, and is independent of such vascular lesions as post-mortem examination reveals, is, I consider, probable; for although these mark well and emphatically the severity and nature of the injury sustained, they are, as a rule, insufficient *per se* to have produced a fatal result. That such lesions exist to a greater or less extent in all cases of cerebral and spinal concussion which do not die wellnigh instantaneously is my belief, and they write the record that the notable disturbance of function observed depends upon *organic* injury. I have some doubt, however, that such evidence can never be absent, and it comes from the observation of cases of cerebral concussion seen at the moment the injury was received. I vividly remember the case of one man—certainly the most striking in my experience—whom I saw fall from a height of some fourteen feet and alight upon his vertex in the hard roadway. The appearance he presented was very impressive: the terrible pallor of his face, the dropped jaw, the fixed pupil and insensitive eye, the arrested breathing, and the absence of all pulse at the wrist, made me believe he was dead. It was only when, having bared his chest and put my ear over his heart, I could detect such far away and feeble sounds as mark generally a rapidly ebbing life that I recognised that vitality was not quite extinct. Under the use of stimulants applied chiefly externally he slowly rallied, and ultimately recovered. But my reflection was this: Suppose that man had died—as in the presence of a heart with feeble walls or one less stable in its ennervation, and in the absence of help, he probably would,—what then would have been the appearances presented by his brain? If, as the experiments of the most recent observers seem to show, a primary anæmia from arterial spasm, the result of a powerful peripheral irritation, be the primary step in the development of the phenomena of concussion, and a congestive stage the sequel to this, it is, I think, probable that the blood extravasations so generally found can only occur after vascular relaxation; and that, if cerebral shock be immediately fatal, a singularly pale brain with great turgidity of its veins may alone indicate the mode of dying. Such a belief is contrary to the teaching of the highest authorities, and it may be groundless; but it is just possible that it may explain the absence of all coarse cerebral lesions in certain cases, attached to the records of which are the names of generally reliable observers.

The occurrence of concussion of the brain, apart from marked injury to its bony case, has always been admitted, but it has been notably otherwise with concussion of the spinal cord. The experience which prompts this note proves, I think, that such an injury may occur without important structural injury of the vertebral column, that it is the result of severe and direct injury, that its symptoms are at once apparent, and that when they are present there is some easily recognisable lesion producing them. The further teaching is this, that the treatment of such cases should be that usually followed in those of cerebral concussions, the main indications being the pursuit of such measures primarily as will prevent the further effusion of blood from ruptured vessels, the prompt relief of that state of active congestion which, as in cases of cerebral concussion, may possibly supervene, and the allowance of such a period of rest as will enable nature to repair the important injuries the cord has certainly sustained.

Cannes, France.

[2] In this reasoning I am not forgetful of the "knock-down blow" from general shock, familiar alike to the army surgeon and to the sportsman, which is apt to follow the blow of a missile, but where the recovery is, as a rule, rapid.

A SUCCESSFUL CASE OF

ILEO-SIGMOIDOSTOMY (SENN'S METHOD) FOR INTESTINAL OBSTRUCTION DUE TO MALIGNANT DISEASE OF THE HEPATIC FLEXURE OF THE COLON;

WITH SOME REMARKS ON INTESTINAL ANASTOMOSIS AND A DESCRIPTION OF A MODIFICATION OF SENN'S BONE PLATES.[1]

BY H. LITTLEWOOD, F.R.C.S.,

HON. ASSISTANT SURGEON TO THE GENERAL INFIRMARY AT LEEDS.

THE following are the notes of the case: G. F——, aged thirty-five, was admitted to the Leeds Infirmary on March 17th, 1891, under the care of Mr. W. H. Brown, with marked symptoms of intestinal obstruction. The patient said that since Christmas he had had a good deal of pain in the right iliac region, and for the last three weeks he had been unable to work. Three days before admission vomiting commenced, and continued at intervals; no motion or flatus was passed during this interval. On admission the patient was very ill, suffering from severe spasmodic attacks of abdominal pain and frequent vomiting. The abdomen was distended. The intestines could be seen distended and

[1] Paper read before the Leeds and West Riding Medico-Chirurgical Society on Dec. 4th, 1891.

moving beneath the abdominal wall. The whole of the right side of the hypogastrium was dull. Before admission the patient had a small dose of morphia. Soon after admission the bowels were well opened. An enema was given, followed by another good evacuation. After this the patient was much better, vomiting and pain ceased. He left the infirmary on March 17th.

He was admitted again on Aug. 14th with well-marked intestinal obstruction. At no time since leaving the infirmary had he felt really well. He had had occasional attacks of vomiting and constipation, often complaining of pain after food. He had seldom been able to work more than two or three days at a time. Latterly the attacks had increased in frequency and severity. The bowels had not been opened for the past five days; he passed flatus a few times during this period, and vomited frequently. On admission the following note was made:—"Patient looking very ill; not much collapsed. Temperature 98·4°; pulse 100. Abdomen distended; resonant. Except low down in the flanks, coils of distended intestine can be easily seen moving (sometimes violently) through the abdominal parietes at frequent intervals. The movements can be easily excited on palpating the abdomen. No tumour can be seen or felt in any part of the abdomen. Complains of a griping intermittent pain, radiating all over the abdomen. Between the attacks of pain there is merely a feeling of distension." Since admission he has vomited several times; the vomit has not been feculent at any time. He has not passed any blood or pus per anum. Nothing felt by rectal examination. Soon after admission I saw the case with Mr. W. H. Brown, under whose care the patient had been admitted, and we agreed that as enemata had answered so well on a former occasion they should again be tried. Mr. Brown, going away the next day, handed the case over to my charge. A gravitation enema of a pint of warm olive oil was given; this was soon followed by a good evacuation, after this a simple enema was given, with good results.—Aug. 15th: Feels much more comfortable; pain and distension much less; vomiting has ceased.—19th: Has been feeling more comfortable; still some distension of abdomen. No vomiting; bowels opened by enemata.—23rd: During last few days patient has not been quite so comfortable. Some feeling of nausea; bowels opened by enemata. Abdomen still distended; patient has a feeling of general abdominal discomfort. Sometimes movements of the bowels can be seen, and to-day can be easily excited by abdominal palpation. At a consultation with the majority of the surgical staff the general opinion expressed was that the case was one of intestinal obstruction due to malignant disease of the colon, probably at the upper part of the sigmoid flexure. Abdominal exploration was advised, with a view of removing the growth if possible; if not, to stitch the bowel above the obstruction to a part of the collapsed bowel below.—24th: The patient being under the influence of ether, with the assistance of Mr. Moynihan, the resident surgical officer, I operated by making an incision three inches long in the middle line between the umbilicus and pubes, going through the edge of the right rectus. All bleeding having been stopped, the peritoneal cavity was opened to the same extent. There was some fluid in the peritoneal cavity. The small intestines were very much distended, some parts of the ileum being as much as two inches in diameter. They were injected. Cæcum and ascending colon distended. Transverse, descending colon, and sigmoid flexure collapsed. A large mass of growth about the size of an orange was found situated in the hepatic flexure and fixed. Mr. Mayo Robson, who was present at the operation, after having examined, agreed with me as to the inadvisability of attempting removal, and thought with me the best plan of treating the case would be to stitch the lower part of the ileum to the upper part of the sigmoid flexure. This I did by first pulling a loop of ileum out of the abdominal wound, emptying it of its contents, then surrounded it with a piece of indiarubber tubing. The same was done to a loop of sigmoid flexure. An incision about one inch long was made in the convex surface of each. Senn's decalcified bone-plates were inserted, and secured in the usual way. Four extra silk sutures were then put in round the margin of the plate, on the convex surface of the two pieces of bowel, to give a little extra security. The bowels were then replaced in the abdominal cavity, the cavity carefully wiped out, and the abdominal wound stitched up in three layers—peritoneum, muscles and fascia, and skin.—26th: Patient feels very well. Has passed flatus; no vomiting; temperature normal; less distension of abdomen.—28th: Patient still feels very well. Had bowels moved to-day. Sits up in bed.—Sept. 1st: Has improved since last note. Dressed to-day, wound quite healed; no distension of the abdomen. One of the bone-plates has passed per anum to-day.—5th: Still improving; bowels acting regularly.—7th: Patient feels very well; has been up to-day—i.e., fourteen days after operation.—10th: Improvement maintained; appetite good.—12th: Says he feels perfectly well.—16th: Left infirmary to-day—i.e., twenty-three days after operation. Temperature 100·2° on the mornings of the 25th and 26th. Temperature 99·4° on the evening of the 27th, and after that normal.

Diet.—For the first five or six days after the operation he was fed chiefly on milk and Benger's food. Had fish on Aug. 31st, chicken on Sept. 3rd, chop on Sept. 4th, ordinary diet on Sept. 7th. Patient was shown at the meeting of the Leeds and West Riding Medico-Chirurgical Society on Oct. 9th; was apparently very comfortable; no abdominal distension; bowels opened every day. A few days after this he went to work as a miner.

The case described above is an additional demonstration

FIG. 1.

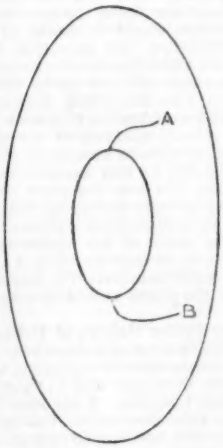


FIG. 2.

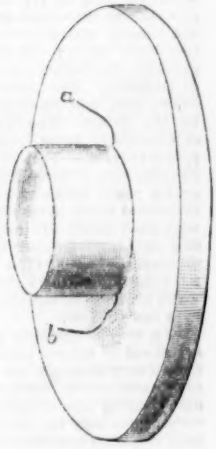
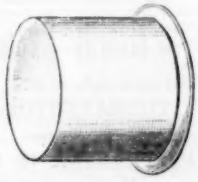


FIG. 3.



to the cases already recorded of the possibility of treating intestinal obstruction by establishing a communication between the distended bowel above the obstruction and the collapsed bowel below, and so cutting off the obstructing portion from the intestinal tract. We owe to Senn an enormous debt for this great advance in the treatment of intestinal obstruction, and, considering his paper was read in September, 1887, at the International Medical Congress at Washington, it is very remarkable that up to the present time only four cases have been recorded of this method having been used for the treatment of intestinal obstruction. Two were performed by Senn, one by Mr. F. B. Jessett, and the other by Mr. Reeves. They are referred to in a letter by Mr. Jessett in THE LANCET of Feb. 21st, 1891. Similar operations have been performed for other causes in several cases—e.g., injuries, pyloric obstruction, &c. This case differs somewhat from the other recorded cases in that the intestine was not divided, but a simple lateral anastomosis made. In Senn's two cases the growth was

first excised; in the other two the operation of lateral implantation was performed; all of them necessitating a division of the intestine.

Before we were acquainted with this method, the treatment of cases of intestinal obstruction requiring surgical interference might have been arranged into three classes:—1. Those in which some definite obstruction was found and was relieved by operation. 2 Cases in which the obstruction was found and could not be removed, an artificial anus being made. 3. Cases in which, after a prolonged search, either the obstruction was or was not found, the patient dying of shock. It is for the treatment of such cases as occur in Classes 2 and 3 that Senn's method offers such advantages. In Class 2 the artificial anus is obviated. In cases belonging to Class 3, if the obstruction cannot be found after a reasonable time has been expended in the search, then lateral anastomosis offers the best chances of a successful termination. From assisting at a large number of cases of abdominal sections, it has always struck me that time is a very important element in the success of a case. By this method there is a great saving of time. With a little practice on the cadaver, or having seen or assisted at the operation, it can very quickly be performed (in about ten or fifteen minutes). I have ventured to suggest a modification of Senn's plates, with the idea of (1) doing away with the four stitches attached to the upper and lower margins of the apertures of the plates, which perforate the whole thickness of the intestinal walls; (2) of performing the operation more quickly; (3) of ensuring a good opening between the two pieces of intestine. The plates have been made for me by Messrs. Maw, Son, and Thompson; the accompanying drawing is by Mr. Haigh. The suggested modification is to fix a tube of decalcified bone (Fig. 3) into the aperture of one of the plates (Fig. 2). This should be made to accurately fit into the aperture of the other (Fig. 1); by this method the two plates could be held together, and the two parts of the intestinal walls between them brought evenly into contact with each other. It might be well to have a piece of fine silk attached to each of the ends of the apertures (as marked A a, B b in Figs. 1 and 2), so that by tying A a and B b together greater security would be made. The intestinal walls around the margins of the plates should be attached by a few sutures.

In a very interesting paper by Dr. Halsted of Baltimore a method of lateral apposition by sutures is described. He insists very strongly on the importance of including some of the submucous layer of the intestinal wall in these and all suturing operations of the intestine. I am sure it is very important to recognise this observation, but cannot help thinking the bone plates will have the advantage over any method of suturing, owing to their simplicity and the time saved in using them.

Leeds.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE NASO-PHARYNX IN INFLUENZA.

BY ARTHUR E. NEVINS, F.R.C.S. EDIN.

SINCE the influenza appeared in Europe a couple of years ago there have been abundant opportunities for everyone to become acquainted with the symptoms peculiar to this disease, and it has been generally recognised that catarrh of the nasal passages, with a more or less free evacuation of mucous, is a very common symptom. Many cases, however, come under observation in which there is comparatively little mucous discharge from the nose. But in these cases also there is always, so far as my observations go, a severe inflammation of the whole mucous lining of the naso-pharynx, which is often more intense, and productive of more acute distress to the patient than in the cases in which the catarrhal symptoms are more obvious. It seems, in fact, as if it was a rule, almost without an exception, that in influenza the infection first attacks the naso-pharynx, and it is the intense inflammation of this mucous membrane (which, when all its ramifications through the ethmoidal and frontal sinuses are taken into account, represents a very large superficial area) that is the cause of the intense debility and grave constitutional disturbances that ultimately supervene. The shock to the system is quite comparable to that of an extensive burn or a rapidly spreading attack of erysipelas. The appearance of the tonsils and pharynx in many cases quite bears out this idea, for the mucous membrane is seen to be of a deep red colour, rather dry, and from its puffiness suggestive of subjacent cellulitis. Nasal respiration is impeded, and there is a heavy, unpleasant smell, which is very perceptible to the patient, and also to those about him.

The intense cardiac and general enfeeblement which accompanies a "hospital throat" is well known; to many members of the profession it has been a painful personal experience. The prostration in cases of influenza is very similar in character, and probably dependent upon the same cause. If this is the case, it would lead us to look to local remedies, applied to the inflamed naso-pharyngeal mucous membrane, as likely to be efficacious in treating the general condition. The object of the present note is to describe a simple line of treatment, based upon a belief in this theory, which has been singularly successful in every case of influenza that has come under my own observation; furthermore, I can testify from personal experience to the immediate relief which it gives to the headache, feverishness, rigors, and other discomforts of the acute stage of an attack. It consists of spraying the nostrils and throat with a lotion composed of four grains of chlorate of potassium, four minims of tincture of perchloride of iron, to one ounce of peppermint water. The patient leans his head well back, and the spray is sent up one nostril until it can be felt trickling into the throat. In about twenty to thirty seconds a free expectoration of tenacious, viscid mucus takes place. The other nostril is similarly treated, and then the throat is sprayed. While this is being done the patient should inhale deeply, as by that means the spray is carried down into the larynx and trachea, which is important, as these parts are often affected by the inflammation. The relief and comfort which immediately follow the application is remarkable, and decrease in the fever is soon noticeable. The patient is able to take some liquid food without retching after it, and as a rule sleep soon follows. If the treatment is repeated at intervals of two hours for the first twelve hours, and of four hours during the next twelve hours, it will be usually found that the temperature is by that time nearly normal, and that convalescence has fairly commenced. As regards general treatment nothing need be said here; it must be adapted to the special circumstances of each case. There are, however, two lines of treatment which should in most cases be avoided. Inasmuch as intense cardiac enfeeblement is very common in these cases, the antipyretic drugs, which are all-powerful cardiac depressants, are contra-indicated. As a rule, purgatives also are undesirable, for it is very common to find some degree of inflammation of the cæcum or colon as a complication in these cases. Hot applications to the abdomen are much more beneficial, as a rule. In conclusion, it may be well to mention that if a spraying apparatus is not at hand, the same effect can be got by pouring about twenty drops of the lotion up the nostril with a teaspoon and making the patient gargle the throat afterwards, but the spray is the more comfortable mode of application.

Hanley, Staffs.

NOTE ON PRICKLY HEAT.

BY J. A. WETHERELL, M.D.

UNDER the term "lichen tropicus" must be embraced three primary lesions, in frequency taking the following order:—1. A vesicular eruption, the vesicle, of the size of a pin's head, elevated on a roseolous, inflammatory base, being filled with colourless perspiration; sometimes arranged in segments of rings, at others diffusedly spread. On a superficial examination, it resembles much the efflorescence of measles or scarlatina, and occurs principally on the nape of the neck, the flexor surfaces of the forearms and legs, and the front of the abdomen. Even habitants for many years of semi-tropical regions are apt to exhibit this form, especially those who wear woollen underclothing. 2. A wheal with a red surrounding halo, accompanied by intense itching,

which induces the sufferer to scratch off the covering cuticle, causing the erythematous effusion to develop a blood-scab. Its characteristics are shown on the backs of the hands and about the ankles, and may be mistaken for mosquito bites. 3. A copper-coloured papule of largish dimensions, on whose surface after twelve hours may or may not appear a pustule. The front of the thorax exhibits this best. The older pathology which regarded prickly heat (lichen tropicus) as a papular eruption, and the more recent, as vesicular—hence termed "miliaria papulosa"—are both partially correct, but also erroneous, inasmuch as they recognise a single lesion. The treatment of all consists in washing the affected parts frequently with superfatted menthol, eucalyptol, or phenol (20 per cent.) soap, allowing the rubbed-in foam to dry, then mopping on with a soft linen rag this lotion: liquor plumbi subacetatis, liquor carbonis detergens, and glycerine, of each one ounce; rectified spirit of wine, three drachms; oxide of zinc, two drachms, to a pint of water; or smearing with the following ointment: vaseline, two drachms; lanoline, two ounces; liquor carbonis detergens, two drachms; oxide of zinc, one drachm; menthol, twenty grains. If of limited extent, a bismuth and zinc powder may replace these. Cotton underclothing should be adopted and frequently changed.

Bunbury, Western Australia.

FORCEPS AS AN AID TO VERSION.

By W. HENRY HARRIS, L.R.C.P.ED. &c.

A CASE I was called to at a long distance by two medical men in attendance in Manitoba may not be without interest. On arrival, I found the patient, aged twenty, in labour, then some twenty hours; primipara; seven months. On examination I found the right arm protruding (had been so some hours, the patient having been kept under chloroform), the right shoulder firmly jammed, and constant powerful uterine contractions, so that the introduction of the hand for version seemed impossible. It occurred to me that if I could apply the forceps (Simpson's long) on the thorax at a point a little below its greatest diameter, gentle pressure would cause the blades to descend towards the pelvis, and so convert the presentation into an ordinary breech. The result was as I anticipated. In this case the fœtus had been dead some hours and the labour premature. My reason for publishing this case in THE LANCET is that I do not see "forceps as a means of version" quoted in the text-books, as well as to suggest that similar means might be applicable in cases where such an unfortunate presentation has occurred.

Maidstone.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

FRACTURE AND DISLOCATION OF THE PELVIS; INTRA-PERITONEAL RUPTURE OF THE BLADDER; PNEUMONIA; DEATH.

(Under the care of Mr. W. ARBUTHNOT LANE.)

THE amount of force required to produce a fracture of the pelvis to the extent described in this case is very considerable. We may remind our readers of the experiments to determine this question recently made by Dr. Areilza which we published in THE LANCET of April 2nd. Intra-peritoneal rupture of the bladder is not by any means a common complication in these fractures, injuries of other parts of the urinary tract much more frequently requiring surgical interference for their relief. It is difficult to say how long after it has occurred a rent in the bladder wall may be successfully sutured. Clinical records prove that the peritoneum is much more tolerant of healthy urine than was at one time supposed; and in the cases treated by Drs. Schramm and Knight, as much as fifty and fifty-four hours had elapsed before an operation was performed, after which recovery ensued. This case is an interesting and important one.

A. F——, aged thirty-seven, a coalheaver, was admitted into Guy's Hospital shortly after 4 P.M. in the afternoon of Feb. 23rd, 1892. He had been driving a heavy cart containing two tons of coals, when he fell off his seat, the front wheel of the cart passing slowly over his pelvis. When seen by Mr. Lane at 5 P.M. he was extremely collapsed. There was a broad, bruised line running obliquely across the symphysis, indicating the course taken by the wheel. The several portions of the pelvis moved freely upon one another. There was no tenderness or rigidity of the abdomen, and he bore manipulation of it without complaint. At that time his condition was not such as to encourage operation, even had there been any indication to do it. He was therefore surrounded with hot bottles and made as warm as possible. He gradually improved, and in about two or three hours after the injury began to complain of a desire to pass urine, and developed tenderness and rigidity of the abdominal wall immediately above the symphysis. On passing a catheter a little bloody urine was drawn off. By 9 P.M. the patient had recovered sufficiently to bear an operation, so Mr. Lane opened the abdomen in the middle line about the symphysis, and found some bloody urine in the peritoneal cavity. There was a large transverse rent which admitted three fingers in the upper surface of the bladder, about an inch and a half from its summit, the adjacent portion of the bladder being much bruised and swollen. The innominate bones were found separated at each synchondrosis and also at the symphysis, the fragments forming the last articulation being separated antero-posteriorly by an interval of an inch. It was apparent that the bladder had been jammed and divided by the forcible approximation of the pubic bone against the very prominent lower margin of the fifth lumbar vertebra, which, as in the case of all powerful coalheavers, was in a position of partial spondylolisthesis. The two pubic bones were placed in apposition, the rent in the bladder was closed by a continuous suture, the pelvis was sponged free of any blood and urine, and a glass tube was left in Douglas's pouch. No attempt was made to wash out the peritoneal cavity, as the urine and mucous membrane of the bladder appeared to be perfectly healthy. Subsequent to the operation but a very small quantity of bloody fluid was sucked up out of the Keith's tube, which was removed shortly. Being only too well aware how often the subjects of such severe injuries die from pneumonia, every precaution was taken to keep him in a warm, moist atmosphere; but in spite of every endeavour he developed a pleuritic rub on the left side on the day following the injury, and although his temperature on only one occasion rose to 101°, his respiration and pulse became progressively rapid, and he died on the evening of the 27th, four whole days after the injury. All abdominal pain, rigidity, and tenderness ceased, and all his urine was siphoned off through a rubber catheter tied into the bladder. At the post-mortem examination, both lungs were found in a condition of grey hepatisation, the disease being more advanced on the left side. The wound in the bladder had healed perfectly, and there was no evidence of any peritonitis.

Remarks by Mr. LANE.—Though these cases of successful suture of rupture of the portion of the bladder wall covered by peritoneum are by no means very rare, yet I think that this case, though it terminated fatally, is worth publishing. The mode of production of rupture is certainly very unusual. It serves to illustrate the fact that the peritoneal cavity is comparatively tolerant of healthy urine, and affords another example of the frequency with which a patient, the subject of a severe injury, may die of pneumonia often unaccompanied by any particular rise of temperature, although the chest itself has sustained no injury, and every precaution has been taken to shield the patient from chill. Except for the unfortunate onset of the pneumonia he might have recovered.

BEDFORD INFIRMARY.

TWO CASES OF INVERSION OF THE UTERUS.

THESE cases are examples of the common variety of inversion of the uterus (the puerperal), which is said to constitute at least 350 out of 400 recorded.[1] The diminished frequency is apparently due to the improved method of treatment in the third stage of labour; and, although there is no evidence that anything unusual was done in these cases, still it is a curious fact that a medical man was not in attendance when the birth of the children took place. For the account of the cases we are indebted to Mr. R. H. Elliot, late house surgeon.

CASE 1. (Under the care of Dr. Goldsmith.)—Emma A—— was admitted to the Bedford Infirmary on May 5th, 1891. Eight months previously to admission the patient was attended during her first confinement by a midwife, and a few days later she called in a medical man as her "womb came down." It was replaced, but she continued to lose blood, especially at her menstrual periods, when she passed clots. There was no foul discharge. On examination the abdomen was found to be rigid, and so little could be felt; the uterus was not made out. The vagina was rugose and dilatable, the cervix uteri soft and dilated; and through it presented a soft vascular tumour as large as a pear, which could be made out to be continuous all round at its base with the cervix, the finger passing into a cul-de-sac, and the sound confirmed the observation. Bimanually the uterus was not felt. There was a good deal of oozing going on, and the patient showed evidence of long-continued loss of blood in her waxy pallor and small, frequent pulse (132). She was put under ether, and Dr. Goldsmith passed a sound into the bladder, and met it above the tumour by a finger passed per rectum, thus confirming the absence of the uterus from its usual situation. He was quite unable to replace the uterus, or indeed to in any way improve its position. The patient was kept at rest, and a medicine containing dilute sulphuric acid and ergot given.

May 12th.—An injection of alum and zinc was employed to restrain the oozing, the only result being some shivering and purulent vaginal discharge on the 14th, accompanied by an evening temperature of 104·2°, which fell to 101·6° next morning. Nothing more definite appeared, and all quieted down.

25th.—Reposition was commenced with Lawson Tait's repositor, the largest cup stem being introduced.

26th.—The next-sized stem was substituted for the previous one, good progress towards reduction having been made.

June 1st.—The uterus is sufficiently reduced to allow the substitution of the smallest stem for that now in.

Later.—This had to be kept in some days to effect complete reduction, and meanwhile the cervix uteri closed upon it, making its removal very difficult and necessitating the introduction of a laminaria tent and the exercise of considerable force (under ether) before the stem could be got away. Some sapræmia ensued, but at once subsided after once washing out the uterus with carbolic lotion. The patient did well, and on July 10th the cervix still admitted the tip of the finger, and was soft. The sound passed two inches and a half. The patient was doing well, and had recovered health, colour, and spirits.

CASE 2. (Under the care of Dr. Coombes.)—Alice H—— was admitted to the Bedford Infirmary on June 29th, 1891. The patient was confined on June 8th, and was attended by a midwife, who called in a doctor, as the woman was bleeding freely. The medical man found a bleeding inverted uterus, which he replaced after removal of the placenta. The patient does not think the midwife pulled on the cord. On June 25th, as she was passing urine, the patient felt the womb come down again, causing her sharp but transient pain. She again sent for her medical man, who at once sent her to the infirmary. On admission she was anæmic, but not anxious-looking. Pulse 96; tongue moist; temperature 102°, which rapidly fell to 99°. Some retention for the first twenty-four hours had to be relieved by the catheter. Abdomen pigmented. Lineæ gravidarum well marked, abdominal walls lax. Uterus not felt, and there was no dulness over hypogastrium, but some tenderness there. On examination per vaginam a vascular tumour as big as a large orange presented. On the introduction of a duck-bill speculum the surface of the tumour was seen to be rough, especially over one part, which was evidently the placental site. Cervix uteri was soft, thin, and dilated, and embraced the neck of the tumour. Per rectum and per hypogastrium the fingers meet above the tumour. There seemed no prospect of a reduction by manipulation under an anæsthetic.

July 3rd.—Reposition was commenced with a Lawson Tait's repositor, the largest stem being used.

5th.—Half the tumour was reduced within the cervix, and the cup was accordingly withdrawn and applied to the remaining part.

6th.—The position of the cup was again changed, and it was now applied to the middle of the fundus, which alone had resisted reduction.

7th.—Stem again required readjustment.

8th.—Smallest stem substituted for the large one, the body being now within the cervix.

9th.—The smallest stem was replaced after the uterus had been douched; body reducing well.

10th.—Stem easily removed; douche given.

14th.—Involution progressing favourably; uterus still large, and cervix soft, but gaining tone. All went well, and the patient was discharged cured on Aug. 8th, 1891.

Remarks by Mr. ELLIOT.—These cases illustrate excellently the very satisfactory effect of gradually applied continuous pressure on an inverted uterus which defies all efforts at more rapid and forcible treatment. In each case the amount of pressure applied was increased (as the elastic grew slack owing to the reduction of the mass) by tightening up the perineal band. A vaginal douche was given thrice daily, and the uterus was washed out each time the stem was changed. Should any cases come under my care I would certainly alter the shape of the smallest stem by substituting a rounded convex end, with a very sloping shoulder on the stem side for the abruptly shouldered cup. I would do this for the following reasons: (1) The cup receives a portion of the fundus into it, and, a vacuum existing, one finds on attempting to withdraw the stem that one is reinverting the fundus by a sort of sucker action; (2) with a more gradual shoulder the removal of the stem would be greatly facilitated. These difficulties apply more in the cases of older standing, like the first, in which the cervix uteri returns more rapidly to its original condition of contraction.

[1] Hart and Barbour.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

EPILEPTIFORM CONVULSIONS FOLLOWING HEAD INJURY; TREPHINING; RECOVERY.

(Under the care of Mr. WHIPPLE.)

THIS is an interesting case of epileptiform convulsions following an injury to the head. The convulsions were always general, there being no marked twitching or spasm of one set of muscles before another, but there was always marked tenderness over the scar of the scalp wound. At the operation there was no great depression of bone or collection of fluid found, but the dura mater was thickened and very adherent to the bone, not allowing the pulsation of the brain to be seen, the result, no doubt, of inflammatory thickening; there was no bulging, as if there was increased intracranial pressure, but the removal of bone must have in some way either have relieved increased intracranial pressure, or else have removed something which acted on the brain as an irritant. For the notes of the case we are indebted to Mr. R. Stanley Thomas, house surgeon.

J. T——, a seaman aged sixty-three, was admitted on December 22nd, 1891, with the following history of having in June, 1891, when at sea, fallen down the hold of the ship, cutting his head and breaking his right leg. He remained unconscious for eighteen hours; on regaining his senses, he suffered from headache for some days. Four days after the

accident he first had a fit, since then he has been subject to fits, having as many as five or six in a week.

When admitted he was a powerfully built man having on the right side of his scalp a concentric shaped scar crossing the fissure of Rolando three-quarters of an inch from the sagittal suture. Pressure over this region gave pain. No depression could be felt. He had no paralysis. His left arm he said was weak, but its power did not vary with that of the right arm any more than would naturally have been expected. His pupils were equal and reacted to light and to accommodation, no paresis of ocular muscles, optic discs normal; urine acid, sp. gr. 1018, no albumen or sugar.

From Dec. 28th to Jan. 6th he had thirteen fits, which lasted from a few seconds to a few minutes before he became conscious. During these fits he became violently convulsed at first, and unconsciousness followed for a variable period. His pulse became very feeble after a severe fit, and occasionally he would be quite collapsed. His breathing was never stertorous, but at times Cheyne-Stokes in character. He would foam at the mouth and bite his tongue, but he never passed urine or motions involuntarily. He suffered from sickness, which was always worse after the fits. He was given potassium bromide in thirty grain doses three times a day; but although the fits diminished in severity, they continued as frequently as before. As his condition had not materially improved he was given chloroform on Jan. 8th, and Mr. Whipple removed with a conical-shaped trephine a piece of bone beneath the scar the size of a shilling. The bone was very thick and the dura mater firmly adherent. No pulsation of the brain was seen, the dura being opened by a crucial incision. A grooved needle was passed in three different directions into the brain, to see if there was any collection of pus or blood, with negative result. The wound was then irrigated and sewn up with silk.

Jan. 9th.—The patient was very restless after the operation. A quarter of a grain of morphia was given hypodermically, and he slept after a second injection. He was troubled with sickness.

11th.—Still very restless. Quiet for a short time, but only after morphia. The vomiting continues. Fed by nutrient enemata and suppositories.

12th.—Head dressed. Sanious discharge under the flap.

13th.—Still very restless and strange. Vomiting continues almost incessantly. Blistered on either side of the neck over the course of the vagi.

14th.—Has passed a better night. Has kept down small quantities of milk-and-water.

17th.—Wound dressed; stitches removed. Wound quite healed. More sensible to-day than he has been since the operation. Keeping down milk. Nutrient enemata and suppositories stopped.

23rd.—Much improved. Takes solid food. Seems quite rational.

27th.—Allowed to get up.

Feb. 8th.—The patient has continued to make an uninterrupted recovery, having had no fits since the operation, and he is now able to walk about and takes his food well. To-day he is allowed to go home.

LITERARY INTELLIGENCE.—Mr. Lewis will publish immediately a Text-book of Morbid Histology, by Rubert Boyce, M.B., M.R.C.S., Assistant Professor of Pathology in University College, London, royal 8vo, with 130 coloured illustrations. The work gives a short account of the more marked histological changes in disease, designed as a practical and theoretical introduction to the higher branches of pathological morphology.

SOUTH DEVON AND EAST CORNWALL HOSPITALS.—The annual report for the past year states that the long-felt necessity for enlarging the Nurses' Institution had been accomplished and the additional rooms provided. The staff of private nurses still numbers twenty-two. It may be added that donations in aid of the hospital funds, in gratitude for the nurses' attention, had been received. The statement of the finance for the year shows an excess of expenditure over available income of £508 13*s.* 6*d.*, and, with the previous year's deficit of £704 18*s.*, the debit balance had increased to £1213 11*s.* 6*d.* Legacies received during the year amounted to £2509 18*s.* 8*d.*, but which could not be applied to the discharge of current expenses.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Appliance for facilitating Performance of Mules' Operation.—Subclavicular Dislocation of Shoulder.—Congenital Umbilical Fæcal Fistula.—Facial Chancre.—Amputation of Penis by Thiersch's Method.—Trophic Lesion following Influenza.—Syphilitic Dactylitis.—Disseminated Lupus Erythematosus.—Inguinal Colotomy.—Tumour of Humerus.—Intestinal Concretion in Lamb.—Infective Melanotic Pigmentation.

A CLINICAL MEETING of this Society took place on April 11th, the President, Mr. Jonathan Hutchinson, in the chair.

Mr. BRUDENELL CARTER exhibited an Appliance for facilitating the Performance of Mules' Operation. This consisted of a small hollow ball of indiarubber, furnished with a stopcock connected by a short tube with a detachable syringe, and capable of being quickly distended by air. As soon as the contents of the sclera were completely removed the ball was inserted, and was sufficiently filled with air accurately to occupy the cavity. The pressure thus exerted speedily arrested bleeding from the divided vessels; and as soon as this was done the ball was suffered to collapse by opening the stopcock, and was removed to make way for the glass globe, the insertion of which completed the operation. Before contriving the indiarubber ball, Mr. Carter was accustomed to fill the scleral cavity with pieces of sponge, which were tedious to insert and to remove, and which were far less efficient as a means of arresting bleeding by compression.

Mr. HUGH SMITH showed a specimen of Unreduced Subclavicular Dislocation of the Humerus. It was obtained from a widow aged sixty-nine, who about the end of October, 1889, fell down, injuring her right arm, after which she never regained the full use of the limb. At the end of April, 1890, she was found to be the subject of dislocation of the right humerus, but no attempt was then made to reduce the displacement. On June 6th, 1890, she was admitted to the Royal Free Hospital under the care of Mr. Boyce Barrow; but, in consequence of her age and the fact that she possessed good movement of the arm, no operation was performed, and she was discharged on the 19th. She died on Nov. 7th, 1891, and two days later the parts implicated in the injury were removed. Mr. J. H. Targett dissected the specimen, and found that the humerus was dislocated and rotated inwards, so that its head was resting upon the anterior surface of the neck of the scapula. The infra-spinatus and supra-spinatus muscles crossed the glenoid cavity and were inserted into a flat piece of bone which was closely connected with the greater tuberosity of the humerus. The long head of biceps was unruptured. It passed up the bicipital groove, and turned backwards at the level of the anatomical neck to reach the apex of the glenoid fossa. The latter was apparently unaltered, and the head of the bone was enclosed in a capsule formed by the anterior portion of the true capsule and the expanded tendon of the subscapularis.—Mr. SHEILD referred to the ease with which accidents of this kind might be overlooked. Three months ago a patient came to Charing-cross Hospital complaining of a sprained arm, and stating that there was no pain in the shoulder-joint. He requested the man to strip, though there appeared no reason for it, and then a dislocation of the shoulder was discovered.

Mr. WATSON CHEYNE brought a male child aged three months, suffering from Congenital Umbilical Fæcal Fistula. It appeared to be an instance in which the bowel ended at the umbilicus. An anus was present and a catheter passed up it an inch and a half. A catheter passed in at the umbilicus only appeared to take an upward direction. He imagined that it was an instance of persistent pervious Meckel's diverticulum, and he thought that though an operation to connect the gut with the rectum was feasible, yet the child would not be strong enough to survive it.

Mr. HARRISON CRIPPS exhibited a case of Facial Chancre. The patient, a middle-aged man, presented himself at the St. Bartholomew's skin department for a growth between the lip and chin. The size at that time was that of a florin.

The growth was raised a sixth of an inch above the skin level, the edges being abrupt; its surface consisted of hundreds of papillæ about the eighth of an inch in length, looking like a warty epithelioma. The surface was dry and not excoriated. There was no discharge. The history given by the patient was that he was perfectly well ten weeks ago; he was then cut by the barber whilst being shaved. Between two and three weeks later he noticed the growth first make its appearance; in about three weeks it had attained its present size. A fortnight later a rash appeared on his body, with sore-throat. The patient was now covered with a most typical secondary squamous rash. The interest in the case was the singular appearance of the primary sore, which had no resemblance to the ordinary Hunterian chancre, looking much more like an epithelioma or warty growth. Had it not been for the history of the case and the secondary squamous rash the diagnosis would have been very difficult.—Mr. HUTCHINSON had never seen a case in which the primary sore exhibited such characters, but perhaps the hypertrophy of the papillæ was due to the poulticing which the sore had undergone. He had seen in the secondary stage of syphilis a definite papillary growth at the centre of the back part of the tongue. The case was of much interest in connexion with the disease framboesia or "yaws," which observed most of the laws of syphilis, having the same incubatory period, and exhibited primary and secondary phenomena, the primary lesion being usually a papilloma and the secondary lesions large papillomatous growths. It had been described as a "syphiloid," though not true syphilis, and was said to be peculiar to the black races. He himself was of opinion that "yaws" was nothing but a papillary form of syphilis, and the case shown he held to bear out that view.

Mr. CRIPPS next showed a case of Amputation of the entire Penis by Thiersch's method. The patient, a man of forty, had cancerous ulceration of the penis, engrafted upon the scar of an old syphilitic ulcer. The disease, of eight months' duration, had destroyed the organ down to the level of the scrotum, the base of the penis being represented by a hard fungoid mass. A semicircular incision was made round this, and carried through the raphé of the scrotum, dividing it into two halves. The corpora cavernosa were dissected off the pubic bone, and cut completely away. The urethra was dissected downwards for an inch and a half, and brought out through a buttonhole slit made on the lower part of the perineum an inch in front of the anus. It was then cut off level with the skin, slit open for a short distance, and stitched to the skin. The patient made a rapid recovery, and when shown to the Society the urethral opening, which would admit a full-sized catheter, could be seen a little in front of the anus. He had perfect control over the urine, and could urinate either in the sitting or standing position with freedom and comfort. Mr. Cripps alluded to the papers of Mr. Wheelhouse, Sir W. Mac Cormac, and Mr Pearce Gould on this operation, and considered that there was much advantage in bringing the urethra out so near the anus, for it prevented the patient wetting himself on going to the closet.—Mr. SWINFORD EDWARDS, in a case of malignant disease of the penis, had operated by Pearce Gould's modification of this method, and on removal of the organ he found a secondary deposit at the back part of each corpus cavernosum at the point where they joined, and this had not been discovered during life, and of course would have been left behind if the organ had been ablated by the old method. Three months later the man was in good health.

Mr. SHEILD showed for Dr. MITCHELL BRUCE a case of Peripheral Neuritis following influenza. The girl suffered from this epidemic in January, 1890, and the following July complained of severe pain in the right axillary region accompanied by hyperæsthesia of the nerves of the arm and spinal tenderness. In July, 1891, there was pain in the right arm and thumb; the nail of the latter having become thick and hypertrophied, and it was evulsed without effect. At the present time there was a good deal of pain in the upper limb and in the thumb and second and third fingers. There was marked muscular weakness of the thumb but no anæsthesia. The radial and musculo spiral nerves were tender, there was tenderness in the right axilla and over the clavicle, and there were tender spots at the tip of the thumb and over the metacarpal joints of the second and third fingers. The electrical reactions were normal.

Dr. COLCOTT FOX showed an infant aged five months, with Symmetrical Enlargement of the Metacarpal Bones of the Thumbs and of the Metatarsal Bones of the Great Toes. The child, a first one, and reputed a seven months one, had been under mercurial treatment for some weeks for a widespread syphilide, and "pseudo-paralysis" of the legs and left arm. Dr. Fox said thickening of the long bones, and Wegner's osteo-chondritis with pseudo-paralysis were frequently met with. The enlargement of the hand and foot bones was much less frequent, especially of the phalanges. He had elsewhere, however, described two cases of syphilitic dactylitis in infants. The diagnosis from tuberculosis was sometimes difficult. The enlargement in this case was probably due to an osteo-myelitis.—The PRESIDENT agreed as to the rarity of dactylitis at this age, but he saw no evidence of its being an osteo-myelitis; it was probably a gummatous periostitis.

Dr. FOX likewise introduced a woman, aged thirty-one, with Lupus Erythematosus of the face, ears, and scalp, and also discs disseminated thickly over the trunk and upper arms. She had hip disease at three years old; the lupus began on the face at about seventeen years, and the trunk had been affected for about six months. The patient's father died of phthisis, and her child had suppurating neck glands. Dr Fox pointed out the rarity of these disseminated cases, and their interest from a diagnostic and etiological point of view. Kaposi, Boeck, and Hallopeau had described malignant or febrile exanthematic cases. No such attack had so far been observed in the case shown.—The PRESIDENT referred to a somewhat similar case shown at Birmingham three years ago. He had never seen a case in which the lesions were multiple and discrete, as in the present instance.

Mr. HARRISON CRIPPS exhibited a patient in whom Inguinal Colotomy had been performed nearly a year and a half ago for rectal cancer. The patient had markedly gained weight and strength since the operation, and was able to go through his daily avocations without discomfort or trouble. As a rule the bowels acted once a day.

Mr. SHEILD showed a case of Tumour of the Head of the Humerus, which occurred in a girl who had suffered from obscure pains in the right shoulder for six years. The swelling appeared to be an osteoma, and caused some displacement of the head of the bone.

The PRESIDENT showed a mass three inches long formed of fragments of undigested food, which had acted as a plug to block the duodenum of a lamb between two and three months of age, which, owing to the death of its mother, had suddenly been thrown on its own resources to obtain food, and had chosen its diet injudiciously.—Mr. SHEILD referred to the frequency with which hair-balls were found in the intestines of horses, cattle, and dogs, the nucleus being often a piece of bone.

The PRESIDENT also showed the picture of a case of Infective or Melanotic Freckles in Senility. It began with freckling, often symmetrical, of the eyelids, and then on one side the pigmentation spread. The mucous membrane and cornea were also affected, which made the case unique. He feared it might end in malignancy, for he had twice seen epithelioma develop in connexion with similar cases.—Dr. SYMES THOMPSON referred to a paper by the President some years ago on Xanthelasma and its connexion with Disease of the Liver, and he asked whether any similar connexion with internal disease was suspected in the present instance.—The PRESIDENT replied that the disease was a local one, was not symmetrical, and probably did not depend on constitutional cause.

CLINICAL SOCIETY OF LONDON.

New Method of Nephrorhaphy.—Traumatic Cyst of Pancreas treated by Incision and Suture to the Abdominal Wall.—Hydatid of Lung treated by Aspiration.—Abdominal Section followed by Parotitis.

AN ordinary meeting of this Society was held on April 8th, Sir Dyce Duckworth, President, in the chair.

Dr. WASHBOURN and Mr. ARBUTHNOT LANE read a communication on a case of Floating Kidney which was treated by a new mode of nephrorhaphy. The patient was a woman aged forty-four, and the case was one of much obscurity owing to the great mobility of the tumour &c. Mr. Lane performed an operation which he hoped would prove more permanent in its results than the method

usually adopted. He exposed fully the posterior aspect of the kidney and split the capsule into ten triangles by means of incisions radiating from its centre, so that when each triangle was separated from the posterior surface of the organ its base corresponded to the margin of the kidney to which it was attached. Then he carefully removed every particle of fat, transversalis fascia, &c., and after twisting each triangular portion of capsule a twisted silk ligature was attached to it. These ligatures were passed through the cut surface of the abdominal muscles, and were arranged in such a way that the posterior surface of the kidney freed of its capsule was retained immovable in immediate contact with the recently cut surface of muscle by means of its capsule, which was anchored firmly by its ten attachments. The woman gained weight and strength rapidly after the operation, and led an active life for about a year without experiencing the slightest discomfort. During this time she followed out the instructions given her—namely, that she was to avoid lifting any heavy weight, though she was encouraged to lead an active, vigorous life. In a moment of forgetfulness she attempted to move a heavy box, and at once experienced great pain in her side. This subsided rapidly, but left her with some of her original discomfort; but though the lower end of the kidney could be felt on deep palpation, there was no evidence of any abnormal mobility of the organ. As she dreaded the further development of her pain, the kidney was again exposed in the loin, when it was found to be embedded in a dense fibrous material which connected it intimately to the cicatrix in the abdominal wall. No light was thrown upon the cause of the slight return of her symptoms. The history of the case indicated the great importance of abstaining from lifting anything heavy after any operation of nephrorhaphy, however perfect.—Mr. GOLDING BIRD said that the author considered his operation better than the ordinary procedure for movable kidney, but he had not given the evidence upon which that opinion was founded; indeed, the case that he had related seemed to be an argument in the opposite direction. After operating in the ordinary way he himself had not found any return of pain, nor had the kidney left its attachment, though the patients were not limited as to exercise. He quoted several cases to show that the treatment had been very successful in his hands.—Mr. HULKE asked if other measures had been tried before resorting to suture. In several cases after operation the old symptoms returned, and the kidney became as movable as before. In many instances he had obtained excellent results by fitting the patients with a truss to which was fixed a horseshoe pad. If such an appliance was successful there was no need for submitting the patient to an operation which was not without risk.—Mr. PEARCE GOULD inquired what was meant by the "ordinary" operation of nephrorhaphy. It had at first been done by a temporary suture, which was passed through from the kidney to the skin and removed at the end of four, six, or more days. A frequent result was that the kidney became loose again afterwards; but if two permanent buried sutures were passed so as to fasten the capsule of the kidney to the posterior part of the aponeurosis of the transversalis muscle, a quite satisfactory result could be obtained. In some cases certainly the horseshoe pad had not given gratifying results. He did not see how such an apparatus could be successfully applied to control the kidney, which lay at the back of the abdomen. When a powerful muscular effort was made, any such pad must at times be quite inefficient in keeping the organ in place.—Mr. GOLDING BIRD added that when he spoke of nephrorhaphy he only referred to the modern method by buried suture.—Mr. HERBERT ALLINGHAM said that in his position as an official of the Surgical Aid Society he had seen a very large number of patients who had been submitted to nephrorhaphy, and who had not benefited in the slightest degree from the operation, the kidney being still freely movable. Under these circumstances, any improvement in the present method of operating would be a boon.—Mr. BOWLBY had seen a great many cases in which the kidney had broken loose from its anchorage. In one case operated on fifteen months ago by a surgeon experienced in these cases three buried sutures were used, and yet the kidney was quite loose and was giving as much trouble as before.—The PRESIDENT thought it was time an expression of opinion from physicians should be forthcoming. When he met with a floating kidney it was not his habit to call in surgical aid. He had known of people who had floating kidneys for twenty years, and yet remained in excellent health. Some suffered slight pelvic pain or a little discomfort at the menstrual nisus, and he held that it was not legitimate practice to interfere with a movable kidney if it gave rise to no more trouble than this. Surgeons did not seem at all agreed as to what should be done; and, if in the small minority of cases operation were necessary, there ought at least to be something like unanimity with regard to the procedure to be adopted.—Mr. R. W. PARKER referred to a patient, by occupation a cook, with floating kidney, who suffered so much pain as to be quite incapacitated from her duties. After failure of rest and pressure he cut down and stitched the organ to her side. Although it still remained quite fixed, the patient was not in the least degree relieved.—Dr. BARLOW, though he had seen a great many cases of floating kidney, had never met with one in which surgical interference was justifiable. They were met with in people prone to abdominal pain, and were much commoner among the better than among the humbler classes of society. It was a serious abdominal operation, not unattended with risks, and the physician who recommended it incurred considerable responsibility.—Mr. LANE, in reply, while he congratulated Mr. Golding Bird on the success of his cases, regretted that he and many others had not been equally fortunate. These cases of course were quite on a par with gall-stones in this: that they should not be meddled with unless they gave rise to great pain. He supposed that when patients found that no relief followed medical treatment they sought surgical aid, and this perhaps explained how it was that physicians did not seem to have met with the graver cases.

Mr. LITTLEWOOD (Leeds) read the notes of a case of Traumatic Cyst of the Pancreas. The patient, a male, aged thirty, was thrown from his horse, the horse stamping on his abdomen with his hind feet. Thirteen days after this a swelling was noticed in the left upper umbilical and lower epigastric regions. The swelling was explored and a syringeful of dark blood removed. The swelling increased in size, at first slowly, and then more rapidly. The patient suffered a good deal of pain in this region. Seven days later, August 12th, the swelling was aspirated in the morning, ten ounces of fluid removed, alkaline, dark sage-green colour, sp. gr. 1015. In the afternoon the abdomen was opened in the middle line above the umbilicus. The cyst was at once seen, having displaced the stomach upwards and colon downwards; it was covered over by omentum. This was torn through, the cyst opened, and the cyst-wall stitched to the peritoneum and deeper layers of abdominal wall; forty ounces of fluid removed of the same character as that removed in the morning; cyst drained. A sinus formed, which closed at the end of two months. Analysis of the fluid collected about ten days after the operation was made by Dr. Clarkson (demonstrator of physiology in the Yorkshire College), and shown to contain the following substances: serum-albumen, salts, trypsin, amylopsin, steapsin, and milk-curdling ferment (meta casein).—The PRESIDENT asked the author to record later the after-history of the case. The pancreas usually after such a lesion became cirrhosed.

Dr. HECTOR MACKENZIE reported a case of Hydatid of the Lung, which proved fatal by rupture into a bronchus nine hours after treatment by aspiration. The patient was a man aged twenty-six, who, until within a month of presenting himself at the hospital, had experienced no recent feeling of illness. He had then seen a doctor in order to be passed for admission to a benefit society, and had been informed, to his surprise, that there was something the matter with his right lung. Shortly after this he began to suffer from cough, shortness of breath, and from pain in the lower part of the right side of the chest, to sweat at night, and to lose flesh. On examination it was found that over nearly the whole of the upper three-quarters of the right side of the chest there was dulness with almost complete absence of breath sounds, and of vocal fremitus. Above there was a resonant area just to the right of the sternum, and the extreme apex was not quite dull. At the base there was a hyper-resonant area, over which loud friction sounds were audible, and the breath sounds were weak. The heart was displaced to the left, and the liver was displaced downwards. The diagnosis rested between new growth, hydatid, and a circumscribed pleuritic effusion. New growth and a circumscribed effusion were both improbable on account of the history. The rarity of hydatid was the only point which made that view unlikely. In

order to clear up the diagnosis the aspirator was used, and a pint of typical hydatid fluid was drawn off. No more was taken because the fluid ceased running. The patient turned very faint during the operation. After the aspiration the patient was enjoined to keep still and remain at rest. He went on well, until six hours later in the evening he commenced to cough and brought up a mouthful of thin blood-stained fluid. This was followed by urgent dyspnœa, with pallor, lividity, and cold perspirations. The cough continued, but little more fluid was brought up. This critical condition continued for over two hours before the patient died, the dyspnœa taking on more of an expiratory character. At the post-mortem examination the cyst was found to be a very large one, capable of containing about fifty ounces of fluid, and apparently existed between the lobes of the lung. A large bronchus leading to the lower lobe communicated with the cavity formed by the fibrous capsule of the cyst. This bronchus lay at the back of the cyst and had been pressed upon by it, thus accounting for the weak breath sounds heard during life over the lower lobe of the right lung. There was recent pleurisy over the right lower lobe, with the formation of fibrin posteriorly. The principal interest of the case centred in the question of the advisability of aspirating or tapping hydatids of the lung. Dr. Bristowe last year reported a case which had died during aspiration, and such deaths were not infrequent. Dr. Davies Thomas's statistics showed that while the mortality of cases left alone was 54 per cent., that of cases treated by aspiration was 27 per cent., and that of cases treated by excision of rib was 16 per cent. It seemed, therefore, both on theoretical and practical grounds, that a free opening with complete emptying of the cyst gave the best chance to the patient.—The PRESIDENT said that tapping these cases seemed to be a very common mode of treatment, and it would be interesting to know in what proportion of cases it had been resorted to in Australia, and with what result.—Dr. BRISTOWE said that, if he remembered rightly, the statistics which had been quoted had been collected from all quarters of the globe and not from Australia alone, and they included also cases of living hydatid with those in which the parasite was dead and in which suppuration had taken place. Experience went to show that the danger of tapping a living hydatid was greater than similarly treating a dead and suppurating one. When his own case was tapped little or no fluid came through the tube, but subcutaneous emphysema developed, which was followed by lividity, dyspnœa, and discharge of fluid from the mouth. At the same time the area of dulness disappeared. If the hydatid were living, the lung tissue around was compressed; but it was not usually much matted or inflamed, and hence fluid, if it escaped, would easily run into the bronchial tubes. He thought that a rib ought to be resected, and a large opening made into the chest before attempting to remove the fluid. Of the cases which had been simply tapped, many died outright, and several of those who recovered were in imminent danger for some time after the operation.—Dr. MAUNSELL said that he had spent over twenty years in connexion with large hospitals in Australia and New Zealand, and during that time he had seen considerably over a hundred cases of hydatid, infesting every region of the body. In all cases of suspected hydatid of the lung a long, very fine aspirating trocar and needle should be used for confirmation of the diagnosis and gauging the exact distance from the surface of the chest to the most superficial part of the tumour. The exploring needle should be much longer, but not much larger, than an ordinary hypodermic needle. If a larger needle were used there was danger of swamping the thoracic cavity with fluid, and causing suffocation or fatal syncope. He had never known serious symptoms to follow the aspiration of a hydatid tumour in the thorax. If the hydatid were very small and situated in the substance of the lung, it might be treated by simple aspiration, the removal of a small quantity of fluid from the cyst often causing it to wither up and undergo degeneration. If the tumour were large, and especially if it contained daughter cysts, if suppuration had taken place, or if the fluid after tapping reaccumulated, it was necessary to make a deliberate incision over the most prominent and surgically convenient part of the tumour, and completely remove the hydatid with its mother cyst. If the tumour were very large it might be necessary to remove a portion of one, two, or even three ribs in order to completely evacuate the hydatid and provide for drainage. Fully fifteen cases of this kind had come under his observation or immediate care without a single fatal result from the operation. Dr. Maunsell concluded with remarks on the treatment of hydatid in the liver and in other situations.—Dr. MACKENZIE, in reply, said that he felt convinced that a fine trocar should be used, preparations being made to follow with operation at once if the tapping should confirm the presence of hydatid. He did not know if these cases were becoming commoner, but he had seen five during the last two years; of these, two had proved fatal during the aspiration or shortly afterwards; one, which was aspirated, recovered, though at the time it nearly died; one was aspirated, and then a rib was excised, with recovery; and one, which had suppurated previously to operation, died after excision of rib.

Mr. STEPHEN PAGET read notes of a case of Abdominal Section followed by Parotitis. He described the case as an example of an acute inflammation of the parotid gland, of which he had collected upwards of a hundred instances occurring after injury or disease or temporary derangement of the abdominal or pelvic organs due to reflex nervous action and not to pyæmia. The patient was a woman aged fifty-eight who had an operation for artificial anus performed on her for the relief of intestinal obstruction on Dec. 20th, the first step being to draw out and fix to the parieties a loop of intestine. The next day, as the bowels were acting well and as the abdominal distension was all gone, the gut was rashly allowed to drop back into the peritoneum. She became restless and even delirious, and appeared for two or three days to be on the point of death. On the 24th acute inflammation of the left parotid gland set in, but the next day she began to mend, and by the 28th both the parotitis and the delirium had gone. Her further recovery was uninterrupted. He remarked that the parotitis in these cases seemed to mark a crisis occurring towards the end of the illness, and being at once followed by recovery. It is not due to any blocking of the duct, the socia parotidis which lay so near the mouth being affected only once or twice in 102 cases. The true analogues of this parotitis were to be found in the salivation of some women in pregnancy and their longing for sapid foods; in the salivation that was observed in gastritis and in cancer of the rectum, and the arrest of salivary secretion which could be produced in a dog by drawing out a loop of intestine from the abdomen.

OBSTETRICAL SOCIETY OF LONDON.

Adjourned Discussion on Cæsarean Section.

A MEETING of this Society was held on April 6th, Dr. J. Watt Black, President, in the chair.

Dr. HEYWOOD SMITH said that one of the most important points to consider was the time of operation, and he had no doubt but that it was far better to wait until labour had set in before operating, as then there would be much more chance of the uterus properly contracting. Having had the opportunity of recently witnessing Dr. Duncan perform the operation, and the great difficulty in obtaining uterine contraction, that gave rise to a considerable loss of blood, the question arose, having regard to the absence of proper healing both of the abdominal wound and also that of the uterus, whether the hæmorrhage might not have been due to that cause.

Mr. BLAND SUTTON gave the details of a case in which he had successfully performed Cæsarean section. The patient, a secundipara aged twenty-six, was the subject of spondylolisthesis, with a true conjugate of less than one inch and a half. The operation was performed without withdrawing the uterus from the abdomen, very little blood was lost, and the time occupied was only thirty minutes. The child was dead. The husband's consent having been previously obtained, the patient was sterilised by tying each Fallopian tube near the uterus by a single piece of silk. Mr. Sutton did not consider it necessary to tie each tube in two places, and then divide it between the ligatures.

Dr. CHAMPNEYS said that in a subject so large he would only allude to two or three points of practical importance. The first was the danger of uterine atony; in addition to the choice of time (after the onset of labour), it was important to prevent the uterus from being chilled. The spray was

objectionable from this point of view; so was the elastic ligature round the neck of the uterus. The second point was a difficulty which arose owing to a sort of hour-glass contraction round the child's neck, making extraction difficult. In a recent case this cost the child its life although it was recognised early, and the head was promptly and powerfully pushed up by an assistant. The third point was the best way of sterilising the patient. If the tube were tied in two places and the piece cut out, it left a raw and bleeding edge of meso-salpinx. The best way was to tie the tube simply, then to pinch up a loop of tube, to tie this with the ends of the first ligature, and then to cut off the loop of tube.

Dr. DUNCAN thought that the Cæsarean section was to be preferred to Porro's operation except in cases where there were uterine tumours, which could be removed at the same time; also where the uterus was affected with cancer, as here the offensive odour and discharge were very likely to cause fatal peritonitis if the uterus was left. Hitherto he had preferred and practised bringing the uterus outside the abdomen before opening it, considering that by doing so the complete prevention of the passage of blood, amniotic fluid, or meconium into the peritoneal cavity more than counterbalanced the risk attending the longer external incision. He narrated a case, however, on which he had performed Cæsarean section since the last meeting of the Society, and which was doing well on the eighth day; but several hours after the stitches were removed, and in spite of plaster having been applied over the abdomen, the whole length of the abdominal incision was torn open during a sudden fit of coughing, the intestines protruded even down on to the thighs, and death from collapse ensued about thirty hours after. Notwithstanding Dr. Murdoch Cameron's opinion and larger experience of Cæsarean section, he preferred choosing his time for operating, and did not wait until labour had set in. He considered that placing an elastic ligature round the cervix was not good, as it tended to cause asphyxia of the child and paralysis of the uterine muscle. He also thought that hour-glass contraction of the uterus could be absolutely prevented by taking care to effect delivery of the child before rupturing the membranes.

Dr. HORROCKS thought that if Cæsarean section and Porro's operation had equal mortalities, then the former would be preferable as being less of a mutilation, but both operations were good, and should be done respectively in suitable cases. He thought Porro's operation should be selected in cases of rupture of the uterus and certain cases of tumour complicating pregnancy. Cæsarean section at the present time could not be compared with cases operated on in the past, as formerly it was done as a *dernier ressort*, and without antiseptic precautions. He had operated by Sanger's method three times and assisted at a fourth. Two of the former died; the other two and all the children recovered. He considered that removing the uterus out of the abdomen before delivery was fraught with danger, and should be avoided if possible. The elastic ligature did not, he thought, prevent uterine contraction. Sanger and Leopold had used it with impunity. In all his cases the operation was performed before labour had set in. Bringing the peritoneal surfaces together by numerous fine silk sutures, as insisted upon by Sanger, occupied much valuable time, and speed was an antiseptic. In one case he inserted a drainage-tube through the cervical canal, but it caused hæmorrhage, and was soon removed. He emphatically stated that it was not necessary for the uterus to be actively contracted in order that hæmorrhage should be stopped. All that was necessary was retraction—that is, contraction having taken place, the fibres then relax, but are not stretched out again; hence it was useless stimulating the uterus further, unless hæmorrhage was actively taking place. He showed sections of the Fallopian tubes made seven days after they had been tied with kangaroo tendon, proving complete obliteration of the lumen of the tube.

Dr. ROUTH wished to speak on three points: 1. To operate on a woman on whom the Cæsarean section had been once performed successfully was a proceeding almost free from danger, as the adhesions contracted between the womb and abdominal wall converted the operation into an extra-peritoneal one. From the tenour of the discussion he believed Cæsarean section would in future be much more frequently performed; and the improvements in abdominal surgery justified one in believing the results would be much more favourable. 2. In the case of a first operation it was very important to ascertain if the child were alive or dead, especially if it had been long dead, as it might be putrid; and in these cases, even with every aseptic precaution, it was very difficult to prevent poisoning. Dr. Duncan had mentioned such a fatal case in cancer of the cervix, and he (Dr. Routh) had had a case in which child and membranes were putrid, and which ended fatally. In these cases Porro's operation was preferable, and safer than Cæsarean section. 3. The incision into the uterus should be made at its upper two-thirds, carefully avoiding the cervical portion, as, if this were incised, the uterine contractions would tend to open the cut cervical portion and make a strain on the ligatures.

Dr. BRAXTON HICKS said that formerly it was a question whether any stitches should be put into the uterine wound or not, and many cases recovered that were not sewn up. He considered the recent improvement in the death-rate was largely owing to the increase in the number of stitches used. He expressed his consent to the advantages of Porro's operation in cases of uterine fibroids, and mentioned a case of the kind under his own care in which a large sinus running across the incision was divided; the bleeding could not be restrained except by undermining.

Dr. HANDFIELD JONES also made some remarks.

Dr. LEITH NAPIER, in reply, said that up to March 23rd Leopold had performed Cæsarean section forty-six times and Porro's operation four times. Of these, forty-six mothers and all the children were saved. Dr. Murdoch Cameron's total now reached eighteen, with two deaths; so that the maternal mortality of these two operators was under 9 per cent. Turning the uterus out of the abdomen before opening it was in some cases unnecessary; in others it greatly simplified and expedited the operation. On the whole, he thought it better to remove the child before extruding the uterus. As to the elastic ligature, although probably the dangers of asphyxia of the child and post-partum uterine atony were exaggerated, he thought it wise, unless reliable assistance were obtainable, to continue using it. With regard to the question of operating before or after labour had set in, there were *pros* and *cons* either way. Harris's cases of uterine tolerance after injury showed that it was not essential to wait for labour pains. He was glad to find Dr. Champneys now adopted the suggestion of cutting the tubes across rather than simply ligaturing them. Dr. Duncan had anticipated his reply to Dr. Champneys' hypothesis that the severed ends might bleed. As a matter of observation there was no oozing, and the divided mucous membrane became retracted within its peritoneal covering; the doubling up was unnecessary.

Dr. JOHN SHAW having made a few remarks, Dr. CULLINGWORTH said, in reply, that, with regard to waiting in all cases until labour had commenced, he did not agree with Dr. Cameron that this was necessary. The advantages of operating in the daytime were obvious, and experience showed that the operation itself was sufficient to excite uterine action and ensure full contraction. He much preferred opening the uterus and removing its contents *in situ*, as it obviated the necessity of a long abdominal incision and possible exposure and chilling of intestines. The uterus, after being emptied, could be brought out if thought desirable, in order to facilitate the suturing of the uterine wound. He regarded as distinct improvements the abandonment of the elastic ligature and the arrest of hæmorrhage from divided sinuses by direct pressure on the cut surfaces. Another advance was the method of suturing by a moderate number of deep and half-deep sutures, doing away with the wearisome peritoneal suturing, until recently thought to be so essential. He recommended those interested in the subject to read a very useful little paper by Dr. Kelly, published in the *American Journal of Obstetrics* for May, 1891, entitled "The Steps of the Cæsarean Section—the Do's and the Dont's." He regarded Porro's operation as a most valuable resource in exceptional cases, and thought that increased experience would enable us to formulate the conditions in which the one or the other operation was to be preferred.

The following specimens were shown:—

Dr. LEITH NAPIER: Axial Rotation of Parovarian Cyst.

Dr. WILLIAM DUNCAN: Uterus, Kidneys, and Ureters from a case of Cæsarean section.

Dr. GILES: (*a*) Congenital Diaphragmatic Hernia; (*b*) Malformed Fœtus (with a drawing).

Dr. CULLINGWORTH: (*a*) Ruptured Tubal Gestation; (*b*) Uterus extirpated for Squamous-celled Carcinoma, which had spread upwards instead of downwards.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Customs and Inland Revenue Act.—Interpretation of Terms in Sanitary Acts.

A MEETING of this Society was held on March 21st, when Mr. S. F. MURPHY, President, occupied the chair.

Dr. SYKES read a communication on the difficulties attending the working of Section 26, Sub-section 2, of the Customs and Inland Revenue Act, 1890, under which houses originally built or adapted by alterations, and used solely for providing separate dwellings for the working classes at rents not exceeding 7*s.* 6*d.* a week, might be exempted from inhabited house duty if certified by the medical officer of health to be so constructed as to afford proper accommodation for each of the families and persons inhabiting them, with due provision for their sanitary requirements. No definition of these conditions was given, and the Local Government Board and the Commissioners of Taxes declined alike to afford assistance or information. The Commissioners and the local authorities too differed in their definitions of "separate dwellings." Dwellings might be wholly or partially separate according as they possessed separate or common entrances, and as the sanitary conveniences were used in common or each "dwelling"—i.e., suite of rooms—had its own. The degradation of adapted or "made down" houses was largely due to the absence of proper control of the common stairs, and it would be a matter for grave regret if block dwellings deteriorated from this cause. The Commissioners maintained that gates closed at night to all but the tenants made the building a single house, for which exemption could not be claimed; but some such control was necessary to prevent the common stairs from being the resort at night of "dossers," vagabonds, and prostitutes; but if the block were deemed to be a private house and the stairs not a part of the public street, police supervision could not be obtained. He moved: "That the Society of Medical Officers of Health considers as unsatisfactory the absence of control over the common stairs of houses let in lodgings and block dwellings in large towns."—The resolution was seconded by Dr. Parkes, and carried unanimously.

Dr. WILLOUGHBY then read a paper on the Conditions constituting (1) an Unhealthy Area, (2) a House unfit for Human Habitation, (3) and Unhealthy or Insanitary Houses; or the circumstances under which the (1) Housing of the Working Classes Act, Part I., or (2) Part II., or (3) the Public Health Acts respectively, should be applied. His intention was, he said, rather to elicit than to impart information, to ascertain the views and practice of others, and thus to arrive at a clear conception of what was to be understood by each of these expressions, and agreement as to the best line of action in dealing with the several classes of insanitary property. He would define an unhealthy area "as one in which (1) the majority of the houses were unfit for human habitation, or (2) were so arranged that reasonable ventilation was impossible, or (3) were incurably damp, or (4) the ground beneath which was saturated with sewage." Among irremediable defects rendering a house unfit for human habitation without entire reconstruction were: (1) "rotten and mouldy" houses, in which the damp was most evident near the ground and on the party walls, not being caused by defective roofs or gutters, and frequently haunted by diphtheria; (2) houses in blind or labyrinthine alleys, back-to-back houses without forecourts or overshadowed by lofty buildings (though there were back-to-back houses which he could not conscientiously condemn); and (3) houses with old and defective brick drains, the ground beneath which was saturated with the sewage of successive generations, generally to be recognised by the presence of rat holes in the floors and walls. Houses unfit for human habitation to be dealt with under the Housing of the Working Classes Act, Part II., if in groups, or the Public Health Act if single, were those in which (1) the conditions just described existed, (2) houses so dilapidated as to be past repair, and (3) in which the structural defects as regards the admission of light and air, drainage of the basement, the position of the watercloset, &c., were such that their removal, though physically possible, would involve a prohibitory expense. The ideal plan of house drainage, which he always required in certifying houses of the better class, with disconnexion of the soil-pipe, a separate ventilating pipe at the head of the drain, and inspection chambers at either end, was out of the question in those occupied by the great majority of the middle and lower classes; but practical security against the entrance of sewer air might be obtained by using the soil-pipe as the upcast ventilator, and interposing between the house system and the sewer a small stoneware interceptor, with a syphon beyond it. The great difficulty in the case of small houses without areas or forecourts was to find a place for even the smallest interceptor, while without a manhole exploration of the drain involved breaking up the ground. He showed plans of an arrangement by which complete interception, ventilation, and facilities for exploration and flushing could be secured for an entire block or street section of a score of houses at the minimum cost, while all drains beneath the houses would be avoided. He would carry a common drain in the rear of each section from the footway of one cross street to that of the next, into the sewer of which it would discharge. There would be a manhole in the footway at each end, with provision for ventilation &c., as in houses of the highest class, save that, access being from the street, it would be under the control of the sanitary authority. Into this would be led from the houses on one or both sides the separate drains, ventilated by their soil pipes and uninterrupted by syphons &c. Again, considering the utter hopelessness of keeping a multitude of private cisterns covered and clean, he would propose that all the houses in a section of a street be supplied through pipes from a large common concreted cistern, erected somewhere in the rear, in a brick chamber, accessible only through a door, the keys of which should be kept by the sanitary inspector and the turncock.—Drs. TATHAM (Manchester) and SYKES (St. Pancras) severely criticised the provisions of the Housing of the Working Classes Act, especially as to appeals, arbitration, and compensation.—Dr. KEMPSTER stated that an arrangement for the combined drainage of rows of houses, with automatic flushing almost identical with Dr. Willoughby's, and controlled by the sanitary authority, had been carried out on the Shaftesbury-park estate.—Dr. WILLOUGHBY then briefly replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Surgical Section was held on March 4th, Mr. Croly, President, in the chair.

The Treatment and Origin of Hammer-toe.—Mr. SWAN read a paper on the treatment and origin of Hammer-toe, and demonstrated that the skeleton was at fault. He deprecated the treatment usually recommended, of division of certain of the soft tissues. From a number of facts which he stated as to the functions of the toes in certain races and the functional adaptability of the second toe, and from a comparison of the feet of anthropoid apes with the lower and higher types of the human foot, and from a review of the embryological development of the human foot, he refers the distortions of equino-varus and other congenital aberrations from the higher type—hammer-toe included—to either an arrest of the evolutionary process, or to a reversion to a lower type, with an unequal development of the osseous and soft tissues.—Mr. HAMILTON considered the Academy was indebted to Mr. Swan for his paper, which was characterised by originality and research, as well as by practical usefulness. The surgeon was apt to follow routine, and he had himself on many occasions divided the flexor tendons for this affection. He had no doubt, from what he now saw, such teaching was erroneous. He had himself been struck with the functional usefulness acquired by the toes, as illustrated by the divers in the Bay of Naples.—Mr. T. MYLES disagreed with some of Mr. Swan's statements, and considered that his deductions were hardly warranted in their entirety. For instance, the second toe, normally, was not shorter, but always longer than the first. Mr. Myles pointed out that in the condition under discussion the position of flexion of the second toe had the effect of removing the broad anterior extremity of the phalanx from between the first and third, and was, in fact, nothing more than a spontaneous effort to diminish the effects of the crowding together of the toes by tight boots.

Some Remarks on Excision of the Elbow joint.—The PRESIDENT (Mr. Croly) made a communication on resection of the elbow. He first described cases suitable for excision, and said the last thing that entered his mind in elbow-joint disease was amputation. Fortunately in disease of

the elbow the humerus was more extensively diseased than the bones of the forearm. He preferred the single incision, made about five inches long, the arm being held as straight as possible during the operation. The ulnar nerve, in diseased joints, in his experience is not necessarily seen. He laid particular stress on the importance of removing a portion of the shaft of the humerus in addition to the condyle, otherwise a stiff joint would be sure to follow. He exhibited a number of specimens of his cases from the museum of the College, showing the amount of bone removed. He also exhibited a radius and ulna from the bone-room of the College, showing the insertions of the biceps and brachialis anticus, the latter insertion being sufficiently low to allow of the removal of the coronoid process. He laid stress on the importance of early passive movements. If sufficient bone were removed no fear of ankylosis need be entertained.—Mr. WHEELER said that he had also cases in which there were scarcely any symptoms to warrant operation as far as regarded external appearances. Some of these cases he described under the head of silent caries.—Mr. BARTON said that in his experience excision had rarely to be performed for ankylosis in flexed position. He endorsed what the President had stated as to the time required for a useful cure, and believed twelve months necessary.

Reviews and Notices of Books.

Consumption: How to Prevent it and How to Live with it. By N. S. DAVIS, jun., A.M., M.D. Philadelphia and London: F. A. Davis.

THIS volume is intended partly as a manual for phthisical patients, giving them the hygienic rules &c. by which they must live, partly as a popular exposition of the nature and causes of "consumption," with the view of interesting the public in its preventive treatment. The author believes that the disease "could be reduced everywhere to very moderate limits if the bodies of children and growing youths were properly developed physically, and if the hygiene of our homes, our offices, and our factories was more perfect than it is." With the view of making the volume of value to medical practitioners, information on climate, exercise, &c., is added. On the whole, the author has executed his task very fairly, though the limits he has imposed upon himself render his work only a slight sketch of a large subject. He does not regard phthisis as contagious, and refers to the futile attempts which were made to stamp out the disease in Portugal and in Naples by vigorous methods of rigid isolation. He agrees with most authorities in regarding the sputa as the main source of its dissemination. He puts climate in the front rank as a curative agent. "The ideal home for the consumptive," he says, "must be where the air is exhilarating, dry, clear, and pure. For those who are greatly enfeebled the location must be one that is free from frequent high winds or intense cold. Coldness is rather beneficial than otherwise to those predisposed to the disease, or who are still fairly vigorous. A rarefied air is also a benefit to them. The ideal home must be so located as to afford its inhabitants tempting and attractive occupations. Whether this locality should be an elevated one with a thin and dry air, or at the ocean-beach with a heavier and moister air, will depend upon the nature and degree of change in the lungs of the individual." Much valuable and not too hackneyed information is given regarding the health resorts of Colorado, Texas, Arizona, Florida, California, &c. On the question of diet, Dr. Davis lays down many good rules. Among others, he says: "For those who have little or no daily fever, an abundance of sugars, starches, and oils are the best; but if fever is quite constant and high, a larger proportion of albumen usually proves most serviceable." The author deprecates the use of alcohol in consumption, remarking that "alcoholics continuously given only heighten the deleterious effect of the disease. Not only is tissue-change, which involves the natural elimination of used-up matter, interfered with, but the capability of the tissues to take up new matter is also lessened." He states that "statistics have been gathered which show that those consumptives who use liquors live, on an average, some months less than those who do not." We should be glad to have the statistics, as the point at issue is one of great importance. On the whole we can commend this little work. Its perusal will help any intelligent reader to a true understanding of the nature of consumption, and of the modes in which the lay public may best coöperate with medical men in arresting the greatest scourge of our civilisation.

The Practitioner's Handbook of Diseases of the Ear. By H. MACNAUGHTON JONES, M.D., and W. R. H. STEWART, F.R.C.S. Ed. Fourth Edition. London: Baillière, Tindall, and Cox. 1892.

THE fact that a fourth edition of this work is forthcoming is a sufficient proof of the increasing interest that is taken by the profession generally in the subject of aural surgery. The present edition is enlarged and copiously illustrated.

On examining this work with scrupulous care, we must confess to a feeling of disappointment. In the classification of subjects, the etiology of diseases, and especially in composition, evidences could be quoted of undue haste and want of consideration. Many sentences might be instanced which are so long and involved that the authors' meaning would be ambiguous to all but those previously well versed in the subject. In the classification of etiology grouping from a pathological standpoint is hardly aimed at. No less than three long chapters are devoted to the consideration of tinnitus aurium and its treatment. The authors deserve credit for their attempts to throw light upon a very obscure subject. We question, however, if they have handled the matter judiciously. For instance, the ascribed and recognised causes of tinnitus, in cases where the hearing was normal, are thus stated: "Recent sea-bathing, fever, alcoholic excess, tropical causes, cardiac weakness, nasal obstruction, puerperal eclampsia, irregular catamenia, mental strain, over-study, menorrhagia, Bright's disease, the menopause, albuminuria, quinine, retroflexion of the uterus with neurosis, pharyngeal catarrh, neurotic temperament, tobacco"! The directions for treatment of a "cold in the head," on page 176, are no doubt excellent, but are as much out of place in a work on aural surgery as a detailed description of the removal of an aural polypus would be in a work on General Medicine. Though the book is enlarged after this fashion, we note that subjects of such importance as operations upon aural exostosis and the instrumental treatment of impacted foreign bodies receive but scanty notice.

The affections of the nose and naso-pharynx complicating ear diseases are fully dealt with in a separate chapter. The authors advise "massage" as of use in certain cases of nervous deafness attended by tinnitus, and in "progressive deafness" due to chronic middle ear changes. We venture to think that before recommending this treatment to students and practitioners very distinct indications should be laid down for its employment, and we must express a difficulty in understanding how "tapotement" over the mastoid could possibly benefit chronic "progressive inflammation" in the tympanic cavity.

The illustrations are very abundant, but some of them are not well executed. While giving due credit to originality and research, we question the necessity of a well-known author attaching his name to such common and trivial inventions as ear-protectors, oral protectors, hand douches, and insufflators. On the pilocarpine treatment, as might be anticipated, the authors write with authority. We notice

that they discourage the use of this drug in chronic affections of the middle ear.

The chapter on the use of electricity by Dr. Cagney is good, and affords a useful guide to those who feel disposed to advise its employment. The directions for using the tuning fork in cases of supposed nerve deafness are clear, and throughout the work portions may be selected which are worthy of praise. Again, though some of the illustrations are indifferent, the coloured plates at the commencement of the book afford excellent representations of such appearances of the tympanic membrane as perforation, chronic inflammation, and cretaceous deposit. The work would not suffer by more careful writing, a more methodical system of classification, and a revision of the illustrations. Even in its present form, however, anyone who reads it will not fail to increase his knowledge of what is taught and practised by many modern authorities in aural surgery and nasal affections.

OUR LIBRARY TABLE.

Traité Clinique et Thérapeutique de l'Hystérie. Par le Docteur GILLES DE LA TOURETTE. Paris: E. Plon, Nourrit, et Cie. 1891.—This is an exhaustive treatise which may be said to embody the views which are current at the Salpêtrière. It is the work of one of the most indefatigable of Charcot's disciples, and it has received the imprimatur of the master himself in the form of a preface. Such prefaces are unfortunately not uncommon, and in such a case as this, while a preface from one from whom may be said to have emanated most of the current doctrines with reference to hysteria as the word is understood in France would have had a certain peculiar value, it is a distinct disadvantage that it is only one among a number. Apart, however, from the preface, we have nothing but praise for the work. The subject is treated in an interesting manner, it is discussed thoroughly, and so far as possible an endeavour is made to elucidate it. The first chapter (there are twelve in all) is devoted to a historical review of the various writings which deal with this and cognate subjects; while the remaining chapters are occupied in setting out and enlarging upon the characters, symptoms, and origins of a disease as obscure as it is interesting. If we were to single out one chapter as more particularly interesting than the rest, our choice would certainly fall upon the eighth, which discusses the various hysterical, or so-called hysterical, affections of vision—a subject which is important in several aspects. But all the parts are interesting, and the book as a whole will be valuable so long as it is kept in mind that such cases as are described in it, and such clinical entities as are recognised, are only to be met with at the Salpêtrière, and so long as we remember that in that school especially there is a tendency to classify as hysterical any obscure case which recovers. We know of no work, however, which gives so graphically, so succinctly, and at the same time so completely, an account of the various vague symptoms and signs which are embodied in the somewhat shadowy figure of hysteria.

Health Springs of Germany and Austria. By F. O. BUCKLAND, B.A.Oxon., M.D. Second Edition. 1892.—Dr. Buckland only claims for his little work that it may prove useful to those who have not time for the perusal of the larger works on the same subject. It consists of a general sketch of the spas of Germany and Austria, and the information given is somewhat scanty, and has no pretence to originality. To take two typical examples. The following is the amount of information given regarding two of the most interesting and important problems connected with this subject—viz., the treatment of syphilis at Aix-la-Chapelle and the treatment of diabetes mellitus at Carlsbad. Regarding the former, the writer says: "The treatment consists in Tigismund's process of inunction, modified so as to suit the course of sulphur baths, together with an internal course of the waters." Regarding the latter, he says: "In this disease [i.e., diabetes] the amount of sugar is diminished and the symptoms generally improved. Life is undoubtedly prolonged, patients being known to return to Carlsbad for twenty years in succession. The number of visitors suffering from this malady increases annually. The effect of the waters does not manifest itself till about two months after the course, and therefore patients must not be disappointed if urgent symptoms are not relieved during the period allotted to drinking." Other leading questions of balneo-therapeutics are dismissed with equal brevity. While Dr. Buckland's book is thus a very slight sketch, only suitable for those approaching the subject for the first time, we have not noticed any important errors, and no doubt many non-professional readers will find the information given as much as they will be inclined to digest.

Indigestion, Clearly Explained, Treated, and Dieted; with Special Remarks on Gout, Rheumatism, and Obesity. By THOMAS DUTTON, M.D. London: H. Kimpton. 1892.—There are many points in connexion with the study and treatment of dyspepsia which still require elucidation, and, although the physiologist and chemist are being pressed into the service, it cannot be said that we have as yet much sound scientific knowledge upon this common condition, which embraces many varieties of functional derangement. The *brochure* by Dr. Dutton is not intended to open up new paths of inquiry. It is rather a description in simple language of the prevailing knowledge of the causes and symptoms of the chief forms of indigestion and their treatment. The author has treated his subject with discrimination, and the hints contained in the book as regards the preparation of foods and the general management of the dyspeptic may prove of service to many.

THE February and March numbers of the *Veterinarian* both contain matter of considerable interest. In the February number Mr. W. Ashton Hancock, M.R.C.V.S., contributes a paper on Tuberculosis, its Prevention and Suppression, in which he holds "that it is not a particularly difficult task to diagnose tuberculosis, especially in the lungs of the living animals, even without the history to guide you." He gives his reason for taking up this position. He also maintains that (1) periodical examination of all dairy stock by veterinary inspectors, (2) isolation and slaughter of all condemned cows, (3) compensation to the owner, and (4) the licensing of dairies would go far to help in diminishing the amount of tuberculosis in this country. In the February number there is commenced an interesting discussion on pleuro-pneumonia, a report of which is continued in the March number. There appears to be very great dissatisfaction, or at any rate disagreement, as to the course of study and method of examination necessary for the veterinary diploma. Those who are interested in the subject will find much of value in Captain Raymond's paper on General and Veterinary Education, and also in the discussion on the report of the Court of Examiners for the veterinary diploma in England and Scotland. Of course the teachers hold that the examination is at fault, and the examiners hold that the fault is in the teachers. There can be little doubt that the outcome of such a discussion will be new methods of both teaching and examination which will prove of advantage to the student.

DISEASED MEAT.—At Walsall, last week, a butcher was fined £25 and costs, or in default two months' imprisonment, for exposing for sale a quantity of meat which was unfit for human food. It was stated that the meat consisted of the carcase of a ewe sheep, which had not been slaughtered, and which defendant bought for £1, and a cow, for which he paid £1 6*s*.

THE LANCET.

LONDON: SATURDAY, APRIL 16, 1892.

THE Irish Local Government Bill which has lately been brought before the House of Commons by Mr. BALFOUR, and concerning the political issues of which a party battle will shortly rage, deserves some examination and attention in its sanitary aspect, as well as comparison with the sister English and Scotch Acts of 1888 and 1889 respectively, which have already received the Royal assent.

On first perusal of the Bill we must confess to some feeling of disappointment at the somewhat disjointed and fragmentary character of the sanitary provisions. But this is soon seen to be unavoidable, inasmuch as the whole kernel of the measure is the power to transfer the functions of boards of guardians, as rural sanitary authorities, to the newly formed County and Baronial Councils. And here Mr. BALFOUR may be congratulated on having succeeded in framing a combined measure of county and district government, by taking advantage of the existence of the Irish barony, and adopting the latter as his administrative unit. In this respect the Irish Bill is superior to both the English and the Scotch Acts.

Clause 10 transfers to the County Council the powers of boards of guardians relating to the execution of the Contagious Diseases (Animals) Acts, 1878–90.

Perhaps the most important sanitary clause of the Bill is Clause 12. This transfers to the County Council the powers of rural authorities relating to the Public Health (Ireland) Act of 1878, the Housing of the Working Classes Act of 1890, the Labourers' (Ireland) Acts of 1883–86, and the Factory and Workshops Act of 1891. For the purposes of this business the county is to be divided into Sanitary Districts, presided over by a Sanitary Committee, consisting of a sufficient number of County and Baronial councillors to represent the cess-payers of the district. These resemble the Districts and District Committees of the Scotch Act. The Sanitary Committees formed as above stated are to be invested with the powers of the rural authorities within their districts, except that they cannot appoint officers or raise money; and are to be entirely under the control of the County Council, which is empowered to secure proper performance of duty on the part of each Sanitary Committee. There is also a power of appeal to the County Council against the Sanitary Committee on the part of the health officer or sanitary inspector of the county. Section 6 of this clause is important, as it gives power (unfortunately, permissive) to the County Council to appoint officers under the Sanitary Acts for any part of the county, duly assigning the area. Their duties and tenure are to be the same as those of the officers of the local district. Finally, Section 10 enacts that if three-fourths of the Irish counties adopt Clause 12, the remaining fourth may, by order in Council, be obliged to do so. Clause 13 gives power to the County Council to enforce the provisions of the Rivers' Pollution Prevention Act (1876), as in the English and Scotch Acts, and to form a Joint Committee as in those Acts. Clause 21 gives power of transference to County Councils of powers of local bodies—e.g., drainage boards. Clause 36 invests the County Council with important borrowing powers for sanitary works and improvements. Clause 42 enacts that the expense of the execution of business transferred from boards of guardians is to be kept separate from the other expenses of the Council, and to be defrayed out of a sanitary rate to be fixed by order of the Local Government Board. This order is to differentiate the rate for "general" and for "special" expenses, as in the English Public Health Act of 1875 (Sec. 229). Clause 50 authorises the formation of a Standing Joint Committee of the County Council and the Baronial Council, and Clause 52 imposes the necessity of the appointment, amongst other officers, of a medical officer of health "for the Sanitary Acts by this Joint Committee." His tenure of office, however, is not so secure as that of the county surveyor, for the latter can be dismissed only "with the concurrence of the Standing Joint Committee," whereas the health officer can be removed at the pleasure of the County Council.

Such are the main sanitary provisions of the proposed Act to extend local government to Ireland. In criticising them we cannot but accord praise to the conception of establishing the superior and the subordinate (or, more accurately, coördinate) bodies at one and the same time. The appointment of a health officer by the Standing Joint Committee of the County and Baronial Councils, under Clause 52, Section 6, is a distinct advance on the provisions in the English and Scotch Acts which make the county health officer's services "available" in the district. But here praise ends. The Bill is far too permissive. The main sanitary change—that of the transference of the powers of rural authorities to the new Councils—is itself to a great extent permissive; so is the appointment of "officers under the Sanitary Acts" by the County Council; and so, too, is the formation of the Standing Joint Committee of the County and Baronies. The appointment of a health officer by the latter is the only obligatory provision of the kind. These defects should be remedied in Committee. Besides these there is a serious omission in not giving the County Council power to make by-laws, which is contained in both the sister Acts. Again, no attempt is made to attract men of special attainments to the public service, by insisting on the possession of a State medicine diploma, as is now necessary in England and Scotland; or to secure them from arbitrary dismissal at the hands of incompetent or apathetic Councils. Further, in the case of there being no joint health officer, but only a county officer, there is no power given to the County Council, on the report of their officer, to make a representation against recalcitrant Baronial Councils to the Local Government Board or the Board of Supervision, as in the English and Scotch Acts respectively.

We trust that our criticisms may bear fruit in the reconsideration by the Government of some of the more important defects and omissions in sanitary administration which we have pointed out, and that before the Bill becomes law they may be corrected in a broad spirit of true statesmanship.

LORD KNUTSFORD has kindly forwarded to us Dr. POUPINEL DE VALENCÉ'S report to the Colonial Office, in which he gives an account of his experiments made

with tuberculin on five lepers at the Barkly Asylum Public Hospital, Mauritius. Two of these cases can be excluded from consideration because they refused to go on with the treatment, although there had not been any evil effects. There remain therefore only three in which it was thoroughly tried. The treatment for all of them was simultaneously commenced at the beginning of May, 1891. Very little account is given of the lepers themselves before the injections, but photographs before and after the treatment are appended, and on the charts it is stated that they were all well marked, but not far advanced, cases of tuberculated leprosy. The patients were weighed and their urine tested before the injections were commenced. The dose began at half a milligramme, and was increased daily, and in four out of the five no reaction ensued until two milligrammes were reached. In the fifth case reaction followed one milligramme twenty-four hours after injection, when he had severe shiverings for three hours, general pains, and weakness, but no rise of temperature; indeed, in four out of the whole five the rise of temperature was slight as a rule, but in two cases it reached 105° F., on single occasions. As a general result there was some shrinking of the nodules, an improved sense of well being on the part of the patient, an increase of weight, and general improvement. There were no bad symptoms as regards the urine. Three had a miliary papular rash, and two had a vesicular eruption round the umbilicus. Dr. DE VALENCÉ thinks that if carried out in alternation with large doses of chaulmoogra oil, most gratifying results would be obtained.

It must, however, be borne in mind that these experiments were made in May, 1891, and that since then many other observers have recorded their experience, which is unhappily not so favourable as Dr. DE VALENCÉ'S was at the end of his investigations, and it would be desirable to know if the improvement obtained by him was temporary or permanent. D. G. DANIELSSEN treated fourteen lepers in Bergen with tuberculin. Five had anæsthetic leprosy, three had the pure tuberculated form, and six had the mixed or tuberculo-anæsthetic form. The experiments were carried on during four months. The commencing dose was one milligramme, and in some of them as much as 320 milligrammes for a dose was reached. The injections were made daily, unless the reactions were severe, when an interval of several days was allowed. In some of the cases the treatment had to be stopped even when only small doses had been reached, because the eruptions in the tuberculated and in the anæsthetic cases became so intense that the disease was evidently aggravated in the same way as used to be observed when iodine preparations were employed; but no case was fatal. This aggravation receives an explanation in the investigations made by Dr. LOOFT, Dr. DANIELSSEN'S assistant, who examined the blood for bacilli both before and after the injections; and, while he never found any before the injections, he did afterwards in several cases, and as far as could be observed they showed no signs of degenerative changes. It appears, therefore, that the tuberculin acts upon and breaks up the diseased tissue which contains the bacilli, and they thus get freely into the circulation. The general reaction came on usually from four to six or twelve hours after injection—occasionally, however, not till after two or three days; the local reaction occurred later. Drs. BABES and KALINDERO in their cases, however, found the reaction did not occur as a rule until twenty-four hours after injection. Unfortunately the conclusion drawn was that tuberculin aggravated the disease considerably, and, by setting free the bacilli, started fresh foci of disease, and made the whole process more active. As in lupus and phthisis, the patients became tolerant of the tuberculin after a time; but the disease progressed all the same, and fresh symptoms were frequently excited; many also of the old lesions became red and sensitive. In the anæsthetic form the patches enlarged, became redder and more sensitive, and new patches appeared.

In a case reported from a military hospital in Japan of a tuberculated leper the nodules diminished in size, and a certain amount of sensibility returned; but these good effects were only temporary, and the patient was losing ground at the time of the report.

Drs. BABES and KALINDERO of Bucharest treated seven cases. Their report, as far as it went, is fairly favourable, but some of their conclusions are not quite in accord with those of other observers. Thus they say that a rather stronger dose is required to produce a febrile reaction in leprosy than in tuberculosis; they find that the interval before the reaction is also much longer, as already mentioned (this is, perhaps, a question of dose). In other respects, they agree with others in stating that the fever lasts longer and the secondary reactions are more frequent, that cumulative action may be observed if daily injections are given, and that the local reactions may be absent, less marked, or late in development. In nerve leprosy local reaction was only once established, and there the anæsthesia was replaced by hyperæsthesia. This is a different result from that observed in Dr. COLCOTT FOX'S patient, treated by Mr. CHEYNE at King's College Hospital, in whom injections of 0·01 were followed by severe pains in the ulnar nerves, and in the calves and knees, with a temperature of 103° F. After the fourth injection extreme and dangerous collapse followed the reaction, the eruption became more prominent and large, blebs formed on both feet, and there were other unpleasant symptoms, so much smaller doses were subsequently given. All these symptoms occurred in a purely non-tuberculated case of long standing which was almost quiescent, obscure pains at intervals being the only symptoms left; the injections therefore had obviously excited a neuritis and revived the typical macular eruption which had faded away. The ultimate result, months after the cessation of the injections, was slight improvement; the patient asserted that she could open her hand better, that the anæsthesia was decidedly less, and that she herself felt better, had increased in weight, and the pains had not recurred. Curiously enough, Dr. POWELL of Cachar, in India, tried it in three well-marked tuberculated cases with absolutely negative results as regards reaction and everything else, even with doses of twelve milligrammes; while, to prove that the fluid was not at fault, two milligrammes injected into a lupus case produced characteristic local and general reaction. Dr. MORROW and Dr. FOX of New York also met with negative results in one case each, even with 20 milligrammes in Dr. MORROW'S case, except that it revived a

pruritus which had become quiescent. Dr. GOLDSCHMIDT of Madeira treated five cases—four tuberculated and one non-tuberculated—with the fluid, and always found that doses of one milligramme and upwards caused general and often local reaction. In one case intense and prolonged reaction ensued, followed by blebs and new swellings of skin and mucous membrane, while on the lower limbs absorption of the leprous infiltration was produced. His general conclusion was, on the whole, favourable; but he said that its use required great caution. Mr. CANTLIE of Hong-Kong used it in seven cases, and he also found bacilli in the blood after injection, there having been none there before. According to this observer, when the leprosy is advanced depression instead of elevation of temperature is produced. Dr. ABRAHAM'S case was ultimately neither better nor worse. In Dr. RADCLIFFE CROCKER'S case a single injection of two milligrammes excited an attack of leprous fever, which lasted three weeks. Scores of new tubercles came out all over the body, but under gurjun oil inunctions they all disappeared again, and there was a little less infiltration in some parts. The patient, a tuberculated leper, had previously improved considerably with large doses of chaulmoogra oil, and had had no febrile exacerbation for two years prior to the injection. As an ultimate result he was not really any worse; but three weeks' fever was a long price to pay for a single injection, and he did not care to have it repeated.

The above cases do not exhaust the list of experiments, but they are sufficient to show that tuberculin is very uncertain in its immediate effects on leprosy; that while in some it produces no reaction or effect at all, in others, even with small doses, considerable and prolonged reaction may ensue; and that therefore not more than one milligramme should be given at first, and cautiously increased according to the patient's toleration of the fluid. Secondly, that it revives the activity of cases which have been quiescent for a long time, producing neuritis, bringing fading rashes into prominence, exciting bullæ, and setting free the bacilli; these may get into the circulation and produce fresh cutaneous and other lesions. In the ultimate effect, while some patients have shown improvement that has not been proved to be permanent, and in some was certainly only temporary, on the whole the position may be summed up by stating that, as far as the results hitherto obtained are concerned, the improvement which may result is too uncertain, too limited in character and time, and purchased at too great a risk of aggravation of the disease by the dissemination of new foci, for it to be recommended as a treatment for leprosy; and although some of Dr. HUNTER'S or similar modifications of tuberculin might lessen the immediate disagreeable effects, the fact of its action being to set free bacilli rather than to destroy them should make us seek in another direction for remedial agents for the relief of victims of this much-dreaded disease.

FOR a long time the thyroid gland was a *noli me tangere* for surgeons, and its removal or free surgical treatment was regarded as a very hazardous procedure. Hæmorrhage was the dreaded complication, and the very free vascular supply to the organ, as well as its proximity to large and important arteries and veins, sufficiently explained the surgeon's dread of incising or excising it. For some years, however, patient and careful attempts have been made to deal with the various diseases of this gland in accordance with accepted surgical principles. It has been excised hundreds of times, division of the isthmus has been freely practised, cysts in its substance have been incised and drained, and solid growths have been enucleated from the healthy glandular tissue. Where total excision of the thyroid was largely practised evidence was soon forthcoming to show that such an operation was liable to be followed by very grave constitutional disturbance. J. L. REVERDIN was the first to call attention to this subject in 1882; but it was not until the appearance of KOCHER'S well-known paper in 1883 that the matter attracted the notice it deserved at the hands of the profession generally. Further investigation, experimental and clinical, has only corroborated REVERDIN'S and KOCHER'S statements. Total extirpation of the thyroid gland has therefore been once more placed in the list of operations to be performed only under very special circumstances, and where no other means of relief is available. Simple division of the isthmus, either by the knife or cautery, has been often successful in relieving compression of the trachea due to bronchocele, and has in some cases been followed by wasting of the enlarged gland. This result cannot, however, be relied upon, and for that reason the procedure is not wholly satisfactory. Injection has long been practised for cystic bronchocele, and the late MORELL MACKENZIE perfected this operation. He used a solution of perchloride of iron, introduced through a special cannula, and retained until acute suppuration had been set up. This inflammation is a serious matter, as is evidenced by the rise of temperature to 103° and even more. This treatment has been largely successful, but it has two obvious drawbacks: it makes the patient very ill, at any rate for a time, and the cyst may take some time to close. More recently these cysts have been incised and drained, the cyst wall being sutured to the skin. Two arguments have been urged against this method: the danger of hæmorrhage from the interior of the cyst, and the fact that greater scarring of the neck is involved than in the treatment by injection. In the majority of cases there is no notable hæmorrhage, but it is well known that the vessels running in the wall of the cysts may be of enormous size and have very thin walls, and then, from the sudden relief of tension in the cyst, is liable to be followed by very abundant bleeding. This can always be arrested by carefully plugging the cyst with strips of aseptic gauze or lint. If the operation is performed with antiseptic precautions and a clean dissection made down to the cyst, the sutures being placed neatly afterwards, only a very fine linear scar, which ultimately becomes almost imperceptible, results.

For the treatment of solid growths of the thyroid gland enucleation is rapidly taking the place of extirpation. So long ago as 1849 PORTA pointed out that distinct tumours occurred in the thyroid gland, which, although embedded in the tissue of the gland, could yet be shelled out from it, and he recorded a case in which he had followed this method. SOCIN of Bâle has practised the treatment by enucleation, and has brought it prominently

before the profession. Of late this plan of treatment has steadily gained in favour, and its applicability has been found greater than was at first thought possible. In the current number of the *Revue de Chirurgie*, A. REVERDIN records his last fourteen operations for goitre, and in no less than seven he resorted to enucleation of the growth in preference to partial excision of the gland. Of the seven earlier cases, only one was treated by enucleation, but of the last seven no less than six were submitted to this process. This was not due to a change in the nature of the cases, but to REVERDIN'S growing preference for and confidence in enucleation as he became more familiar with it. While recording these cases, he discusses the details of the operation. He recommends the exposure of the thyroid gland by a single straight or oblique incision extending the entire length of the tumour. If it is found that more room is needed, other incisions can be made later; but, as a rule, a linear incision is sufficient, and is much to be preferred to a flap wound of any kind. The muscles over the tumour must be cut, and the ends carefully raised and turned aside. When the thyroid gland is exposed the outer surface is often crossed by large and thin-walled vessels, and some of these will need to be carefully divided between two ligatures in order to expose a surface large enough to admit of the removal of the tumour. These vessels are so tender that if not handled very gently with forceps they tear and give rise to troublesome hæmorrhage. The tumour is then cut down upon by a series of careful incisions carried through the gland tissue over it. The exterior of the capsule of the growth can be distinguished from the rest of the gland. With his finger, if possible, the surgeon quickly isolates and then removes the tumour. This should be done as quickly as possible, and the surgeon will derive great help from a good assistant. Hæmorrhage may be very free, and the bleeding vessels must be seized with forceps and carefully tied, while smaller vessels may be controlled by sponge pressure. The divided muscles must be carefully stitched together, and the edges of the skin incision brought into apposition, after making due provision for the drainage of the cavity left. The patients often make a very rapid recovery from this operation. REVERDIN allows them to get up within a few days, and does not think it so important to keep the head at rest in the horizontal position as to gain the advantages in respiration and circulation that the upright position affords. When repeated injections of iodine or of similar irritants have been made into the tumour, enucleation may be impossible owing to the inflammatory process which the irritant excites, causing adhesion of the tumour to the surrounding glandular tissue. In such cases partial extirpation of the thyroid gland is the only operative means available.

THE Wandsworth District Board of Works has resolved to recommend the Local Government Board to insert a clause in the by-laws of the Public Health (London) Act to compel the occupiers of houses to cleanse their water cisterns once every six months, and to compel the owner of the house to place the cistern in such a position as would be easily accessible to the tenant.

Annotations.

"Ne quid nimis."

A CORONER ON UNQUALIFIED ASSISTANTS.

A VERY sad case is reported from Luton—the death of a young unmarried woman in lodgings after giving birth prematurely to a child. According to the evidence, on Wednesday, March 16th, she was not very well, and did not get up. Between two and three in the afternoon she said something which resulted in her landlady finding indications of the birth of an infant. On the Thursday she got up and came downstairs. In the night she seemed ill, with pain in her head. On the Friday evening she began to be delirious and wandering. The landlady then suggested the attendance of a medical man, and the patient expressed a preference for one from Dunstable, "Dr. Beart," whom, it transpired, she had consulted on several previous occasions. The landlady went to see "Dr. Beart of Dunstable," and explained what had happened, and he gave her a bottle of medicine, and told her if the patient were not better on the Saturday to let him know, and he would come and see her. She was worse on the Saturday, and the landlady sent a note to "Dr. Beart," and he came over in the evening and gave a prescription. After this medicine the raving ceased, and she slept a good deal in a semi-conscious way. On the Sunday a neighbour said something which induced the landlady to send for Dr. MacArthur, who found the patient in a dying condition, and she did die in an hour. At the inquest "Dr. Beart" said he was assistant to Mr. Henslowe, physician and surgeon, Dunstaple, and that he was not registered as a medical practitioner. He had resided at Dunstable for twenty-five years, and was formerly assistant to Dr. Hicks. When the jurors began to investigate the qualifications of "Dr. Beart," the coroner said they were going into matters outside the duties of coroners. We should not have thought so. The coroner then said: "They then came to the question whether she was properly treated by Mr. Beart. Well, he had known Mr. Beart for several years; he was a man who had had considerable experience, and he believed experience in midwifery cases. He in his evidence had stated that he was acting as assistant to Dr. Henslowe at Dunstable. "You can understand, gentlemen," remarked the coroner, "that I can approach this question without the slightest bias or the slightest professional feeling in any way whatever. Now it is a common, a very common, case, where a medical gentleman is called for him to send his assistant, and in nine cases out of ten the assistant is not what we call a qualified registered practitioner. He simply goes and attends the patients, and tells his principal on his return what he has done, and you may generally assume that he has done what is correct, for he would not be employed as assistant to a medical man unless he had had a considerable amount of experience as a dispenser and in other ways." He added that he thought the young woman seemed, as far as he could judge, to have had all the attention that she could have from the time of her confinement, and he submitted that she died a natural death. He thought it totally unnecessary for him to order a post-mortem examination, &c. Does the coroner know that the employment of unqualified assistants, as in this case, at a distance from his principal, who has never himself seen the case, is regarded by other coroners with the greatest dissatisfaction? It would be wrong to censure Mr. Henslowe on the evidence of so weak an argument as that used by the coroner; but his connexion with "Dr. Beart," and his non-appearance from first to last in a case so grave, ostensibly under the charge of "his assistant,"

are facts that require elucidation from him. Such a death is a tragedy that has happened before and will happen again. According to the *Luton Reporter*, the Home Office is to be communicated with on the subject.

LORD WANTAGE'S COMMITTEE.

THE evidence, which is very voluminous, taken before the committee appointed by the Secretary of State for War to inquire into the terms and conditions of service in the army, has just been issued in the form of a large Blue-book. It appears to bear out very much what we have already said on the subject. It is not so much from the evidence of generals and other officers of high rank as from that given by the non-commissioned officers and privates that the most valuable information is to be obtained as to the requirements of the rank and file. They are, after all, the persons principally concerned. The root of the matter with them is briefly this: that they want a clear shilling a day and free rations, and had enlisted under the impression that they would get this, but do not. We are glad to notice that the subject of unnecessary night duties has not escaped attention. Their prejudicial effect on health is generally admitted, and there is really no good object attained by multiplying sentries in various directions, as is the case at present. Now that the Duke of Connaught has called attention to the matter in connexion with the Guards, perhaps something will be done. It has always seemed to us that there is too much separation between the civil and military classes; they do not know one another enough—and are not sufficiently amalgamated. A good deal of the popular prejudice against the army is simply the result of ignorance. There is no reason why military bands should not play inside barrack squares and the general public be encouraged to walk about the grounds and listen to the music. The old spirit of an objectionable kind of militarism may still remain in some continental nations, but it does not exist and has no force in this country. The army is a voluntary one, and is maintained for the good and defence of the nation. The greater the social intercourse between the civil and military classes, the greater will be the amount of sympathy, friendliness, and mutual respect between them.

COMPETITIVE DIETARIES.

THE great Roman general, Corbulo, we are informed by Tacitus, was in his Armenian campaign reduced to extremities, his army having suffered, not indeed from losses in battle, but from being driven to satisfy its hunger from the flesh of sheep. To the average Briton into whose dietetic cult the mutton-chop enters so largely, this announcement must seem inexplicable; so much so that he might be excused for thinking lightly of the stamina or pluck of his forefathers who allowed themselves to be conquered by soldiery for whose stomachs the flesh of sheep was too strong. The fact is, however, as Tacitus has stated it; and we know from other authorities that animal food as a constant element in the Roman soldiers' fare was found hurtful to his health and efficiency. Cæsar, in his Gallic war, tells the same story: "Ut complures dies milites frumento caruerint et pecore extremam famem sustentarent" (how for several days his troops did without corn-meal and sustained the extreme of hunger on mutton). Corn-meal was the grand necessary of life to those legionaries who, led by Cæsar, subdued the world, and who counted themselves starved, and were apt to mutiny if reduced to the "famine fare" of animal food. Even British troops have been known to suffer from an exclusive meat diet, as indeed we found to our cost in the Zulu campaign of 1879; while the preference of the Roman soldiery for vegetable food has its justification in the experience of the Russian army, and still more of the German one in 1870, which carried that memorable campaign to its triumphant close on the *Erbswurst* (pea-sausage flavoured with a little bacon). Without for a moment lending countenance to the vegetarian who would cut off butcher's meat from human consumption, we may concede to him that an animal diet, unbalanced by a due proportion of the "kindly fruits of the earth," is distinctly prejudicial to the consumer, particularly to the resident in cities, whose opportunities of open air exercise are few and far between. We are still in want of such a series of experiments on the nutrient and sustaining values of foods, vegetable and animal, as the late Professor Parkes of Netley instituted with such conclusive results on the various kinds of drink, from water up to spirits. Till statistics of equal comprehensiveness and accuracy are furnished us we must be content to remain imperfectly informed as to the competing claims of the two great factors of solid alimentation. In the half light we possess on the subject we must expect partisanship on either side—the vegetarian insisting on the exclusive virtues of his special diet and his carnivorous antagonist appealing to physiology and personal experience in favour of butcher's meat. "Competitive dietaries" are thus forced on a bewildered public, and the physician is often called in to repair the damage done to themselves by those who, on either side, have had too much "the courage of their convictions." That men and women should be trained to become "the intelligent custodians of their own health," as Sir James Coxe so well expressed it, must always remain a pious opinion till science and experience have authoritatively pronounced themselves on the due balance—not antagonism—between the animal and vegetable factors of daily food.

EPILEPTIC COLONIES.

IN the current number of the *Journal of Mental Science* Dr. C. Theodore Ewart discusses in an interesting manner the ever-present problem, What is to be done with epileptics? The question is discussed principally with reference to the working of epileptic colonies, in the establishment of which this country has taken so far scarcely any practical steps and Dr. Ewart's paper is an important contribution towards the solution of the problem. After describing the various efforts which have been made in other countries to grapple with this subject, he summarises the main principles which he thinks should be observed in the organisation of such a colony. The first essential is land, to consist of at least 500 acres of farm and woodland, well adapted to agricultural and horticultural purposes, within easy access of a large city, which would naturally supply a market for the produce. Then there must be small buildings, arranged in separate divisions for the male and female patients, each of the divisions to make provision in separate cottages for the demented, the convalescents, the school children, the workers, and the private patients of the higher classes. Medical care of each patient must be provided for, and there must be educational provision for epileptic children, and workshops, farm buildings, dairy, &c., for the adults, as well as a special laboratory for the study of epilepsy by a skilled pathologist. The two arguments advanced against the establishment of two types of asylums are that there would be a sameness of occupation, a want of hope, and an absence of object, calculated to drive a sane man into insanity in a short time. To this argument Dr. Ewart replies that in such a colony as is proposed there would be neither lack of objects nor absence of hope. The second argument touches the financial question, for it might be said that the drafting off of chronic cases would necessitate the introduction of a larger number of sane workmen and workwomen. To this Dr. Ewart's reply is that the welfare of the patients must be the first duty of a committee,

and he protests against the idea that the chronic cases are incurable. Even if they are, that is no reason why they should not be made useful, as such a course would give them an interest in life which, to say the least, would tend to ameliorate their condition. Besides, by separating the acute from the chronic, each class is placed in better circumstances for rapid recovery; the time of lodgment would thus be shorter, and the expense correspondingly lessened. This great problem is one which must be faced; it is obtruding itself more and more every day, and if by the means proposed we can in any way lessen the misery and brighten the lives of many of our fellow-men and women, while we protect the helplessness of childhood, and develop it into something better and more useful than under present conditions it has the chance of attaining, it is our duty, and it ought to be our pleasure, to make the attempt, even if it may entail at the commencement some sacrifices. But even from the economic point of view such a course will in the end bring its own reward.

THE LONDON COUNTY COUNCIL AND LODGING-HOUSES.

WHETHER we regard it from a social or a sanitary standpoint, the question of the licensing and regulation of common lodging-houses is and must be a matter of increasing public interest. Their growth is a necessary consequence of the influx into towns of a numerous working population, and their cleanly and otherwise efficient management is of course essential to the welfare of the whole community. We need not feel surprised, therefore, that the London County Council, as a responsible civic body fresh from its promises to the electorate, has thus early devoted a share of its attention to this question. At present the control of lodging-houses is vested in the hands of the police, an arrangement which is connected with obvious advantages of supervision. This control the Council would prefer to have transferred to itself, and it was in order to further its views on the subject that a deputation of its members recently waited upon the Home Secretary. The interview, though, as might have been expected, not decisive of any practical issue, is noteworthy as roughly indicating the grounds of a future settlement. The right hon. gentleman, we gather, would have no objection on sanitary grounds to the transference of the powers above mentioned. He freely admitted the excellence of the administrative machinery available for this department of the Council's work. At the same time, however, he recognised the necessity of reserving to the police authorities the practically unlimited power at present possessed by them of entry into lodging-houses. Little more, if anything, remains to be added to these arguments. The social and sanitary interest of the Council in establishments of this class is in no way incompatible in its exercise with that of the police, which is primarily and mainly judicial. We know of no reason why each of these authorities, as being most efficient in its proper sphere, should not exert its legitimate influence within that sphere in parallel association with the other.

NITROGENOUS ASSIMILATION.

THE effect of various forms of treatment on the assimilation of nitrogen has been studied by some of the recent candidates for the M.D. degree of the St. Petersburg Medico-Chirurgical Academy. Dr. Yaroff found that by regularly washing out the stomach the assimilation of the nitrogenous principles of food was increased, and where there was chronic gastric catarrh with constipation, these conditions were cured. He remarks, however, that for this result to be obtained it is essential that the patient should be accustomed to the use of the œsophageal tube, so that it can be introduced without difficulty. Tables are given showing the weight of different kinds of food, and of the nitrogen contained in each, together with the amount of fæces and urine, and their nitrogen, from which the percentage assimilated and metabolised is deduced. The assimilation was always higher by 2 or 3 per cent. during the week the washing-out was carried on than during the succeeding week, the metabolism on the other hand being generally lower—once as much as 20 per cent.—though occasionally slightly higher. Dr. Velichkin found that while hot-air baths were being taken the assimilation of nitrogen always improved, the average increase being over 2 per cent., and in most of the cases some increase on the normal amount was observed for several days after the baths had been discontinued. The baths likewise increased the nitrogenous metabolism on an average about 4 per cent. Dr. Sevastyanoff administered warm salt baths at 95° F. to phthisical patients, and found that the assimilation of nitrogen was increased, not only while the baths were being given, but also after they had been discontinued. As to the nitrogenous metabolism, it was increased quantitatively both during and after the baths, but, qualitatively considered, the change was lessened. Dr. Yavein, during observations on healthy persons, found that large doses of bicarbonate of potash somewhat diminished the nitrogen assimilated, citrate of potash having no effect. Both these substances, when given in considerable quantity, slightly increased the nitrogenous metabolism. It was noticed that while either of them was being taken the weight of the body increased, though it subsequently fell. This increase appeared to be due to an accumulation of water in the system, which was afterwards lost by increased secretion.

A CURIOUS SITUATION FOR A GOLD STOPPING.

AT a recent meeting of the Odontological Society, Mr. Newland-Pedley showed a dry specimen of sequestrum from the buccal surface of the alveolar process, in which a gold filling had been inserted. The patient presented herself complaining of a little hole in her gum, from which there was an offensive discharge. She said there had been a gumboil over the root of an upper back tooth which had led to the existing condition. The patient had consulted her dentist about a disagreeable discharge, and about fifteen months ago he inserted a gold filling in the little hole in the gum. On examination it was found that a gold filling was inserted in necrosed bone, and with the aid of a little cocaine a small sequestrum was removed with the filling *in situ*. It appears that the dentist had drilled into the alveolus between the two buccal roots. Was the necrosis due to this operation or of prior existence?

THE MONGOLIAN EYE.

IN the *Boston Medical and Surgical Journal* of March 3rd, 1892, is an abstract of a paper by a Japanese medical man published in the *Sei-I-Kwai Medical Journal* of Dec. 26th, 1891. This observer has studied in detail the differences between the characteristic eye of the Mongolian nations and of the Caucasian race. The difference between the two is caused neither by the size of the eyeball nor the colour of the iris, which is the same in both, but results from the shape of the eyelids. The epicanthus, a fold of the skin covering the inner canthus, is rare in adult white persons, but exists physiologically among the Japanese, so that it is sometimes called the Mongolian fold. In the majority of cases this fold runs obliquely inwards and downwards from the upper lid, so that the inner canthus is not round, as in white people, but sharp. When the fold is large it spreads to the inner part of the

lower lid, in which case the upper lid does not cross the cornea horizontally, but obliquely, giving the peculiar expression to the eye often met with in Japanese. Another peculiarity of the upper lid in Mongolians is the lack of development of the orbital furrow, the groove below the eyebrows. The skin covering the upper lid is very loose, so that when the cartilage is raised the skin is thrown into a transverse fold. When this fold is well developed it droops slightly over the margin of the lid. This interferes with the eyelashes, directing them downwards instead of forwards. In Japanese the cilia are short and straight. On the lower lid they are sometimes so badly developed and so few in number that they appear at first to be absent. When well developed they are sometimes bent inwards by the peculiar formation of the upper lid, and may seriously irritate the cornea. Except for this there is no great difference in the lower lid of Mongolians and Europeans. The margin is generally more curved in white people, so that there is often a portion of the sclerotic exposed between the lid and the cornea, a peculiarity, the author remarks, which makes "their eyes looking apparently upwards generally." As the skin of the lid is less firmly connected to the subjacent tissues in the Japanese, entropion is more common, but ectropion less common, among them than among Europeans.

SURGEON CAPTAIN G. E. HARE, D.S.O.

WE are glad to congratulate Surgeon Captain G. E. Hare, of the Medical Staff, on his being appointed Companion of the Distinguished Service Order, in recognition of his services during the operations against the Kachins and in the Wuntho District, Upper Burmah. It can never be said that officers of the Medical Staff are wanting in gallantry when the opportunity occurs, and when calls are made upon their sense of duty under the circumstances in which they frequently find themselves in the field.

EFFECTS OF CHLOROFORM INHALATION ON THE BLOOD AND URINE.

DR. SOKOLOVSKI has published some observations on the hæmometrical and morphological changes in the blood occasioned by the inhalation of chloroform. He examined specially nineteen cases, which he divided into three categories, according as there was no blood lost, an appreciable quantity of blood lost, or the narcosis was of long duration; he observed the blood at regular intervals. He found that during the first few hours after the chloroformisation the actual number of young or immature white corpuscles was diminished, though not to a very marked degree—e.g., in one case their number per cubic millimetre fell from 1743 to 1300; the number of mature corpuscles, on the other hand, always increased. The increased number of white corpuscles during the early period appeared to be due to an increase in the multinuclear hypermature "neutrophil" elements, the number of which in the case above referred to increased from 5395 to 14,805 per cubic millimetre, so that the morphological metamorphosis of the blood increases in the sense of a change of elements to the latest stage of their existence. Later on, from the second day, the actual number of white corpuscles begins to diminish, and goes on diminishing, and may continue to do so for as long as ten days, until it has fallen to normal. During the whole of this period not only the actual number of immature and even of mature white corpuscles, but their number as compared with the hypermature, increases, while the number of the latter diminishes, falling ultimately sometimes below the normal for a time. This chloroform leucocytosis or lymphocytosis may be analogous to that due to certain other drugs as camphor, turpentine, or cocaine, or to that occurring in certain febrile conditions—relapsing fever or pneumonia. The temporary increase of the immature and mature mono-nucleated elements may be, according to Dr. Sokolovski, regarded as a true reaction on the part of the lymphatic and hæmatopoietic organs, due to the stimulation produced by the diminished number circulating during the chloroform narcosis. Another Russian observer, Dr. Sokoloff, who investigated the effect of chloroform inhalation in both man and animals, found that in most cases a minute amount of albuminuria occurred, which, however, soon disappeared. In some of the human subjects there was also a slight amount of peptone in the urine.

THE REPORT OF THE VACCINATION COMMISSION.

IT is understood that in their forthcoming report the Commissioners will recommend the abrogation of cumulative penalties on persons charged with neglecting to have their children vaccinated. Attention will also be drawn to a point frequently overlooked—namely, that magistrates have a discretionary power in regard to the imposition of fines. In the Act of 1867, 30–31 Vic., cap. 84, it is provided that a person failing to comply with the regulations "shall be liable to a penalty not exceeding 20*s.*"; and in the amending Act of 1871, 34–35 Vic., cap. 98, the same phraseology is used.

THE ISLINGTON MEDICAL OFFICERSHIP OF HEALTH.

THE Local Government Board have declined to sanction the appointment by the Islington Vestry of Dr. Wynn Westcott as temporary medical officer of health for Islington for six months in succession to Dr. Meymott Tidy, as being contrary to the by-laws of the vestry and without advertisement. It would have been a serious blow to the purity of local government if the Board had done otherwise. We shall not dwell on an incident so painful as this is. We can only rejoice that the local profession and the local press have together fought for the observance of the usual and obvious rules by which fair play and efficiency are secured in elections of responsible officers.

OCCUPATION FOR THE FEEBLE-MINDED.

FROM time to time we are reminded by its effects upon social or political conditions that the thinking power of Birmingham is not bounded in its applications even by the wide circle of its varied industries. Art and science have been appreciably indebted to its influence. It is, however, especially in the guidance and reform of civic and social usages that we are accustomed to trace the effects of this healthily active leaven. By way of illustration, we may mention a recent project which owes its rise to the kind originality of a ladies' committee. There exists in the hardware capital, as in other cities, a residuum of mentally weak but not incapable persons. Overmatched intellectually by the average man or woman, they have no definite position or sphere of usefulness among their neighbours, and are consequently as a rule dependent either on friendly maintenance or on parish relief. The committee already mentioned has taken account of these poor people, or more strictly, of the women among them, and has organised for them a system of profitable employment. This consists in the establishment of a laundry with adjacent cottage homes. The household and working expenses of the institution are to be defrayed partly by the earnings of the inmates and partly by subscriptions paid by their relatives or by parochial guardians. In this way their intellectual talent, however meagre, will be utilised, and it is at least probable that an effectual check will be placed upon the reproduction by such

persons of a progeny as lacking in parental care as in mental capacity. There is also a very fair prospect that the mere process of employment will do something to awaken and strengthen the dull faculties of these semi-imbeciles. Every true friend of his species will therefore wish well to the Birmingham experiment, which might even be extended to meet the case of half-witted men, and which, if successful, will certainly not fail to be repeated in the social usage of other communities.

HEALTH OF THE PRINCE OF WALES.

FROM time to time there appear in the lay press certain statements regarding the health of the members of the Royal Family, which the merest smattering of knowledge of anatomy and physiology would show to be unfounded. Thus, referring to the health of the Prince of Wales, it is gravely stated in one of our contemporaries that "several months ago much anxiety was caused by the presence of a clot of blood in one of the Prince's legs; and this anxiety was intensified by this clot travelling from one limb to the other." By what circuitous route the journey of the clot was performed, and how frequently the passage from the one side of the body to the other was undertaken, are wisely left without remark. The newspaper in question prefers to exercise itself with "annoyances and troubles which have recently fallen to his share." Here undoubtedly it is on safer ground. The Prince of Wales has suffered much from the calamity which recently befell the nation, and this has led to depression and to some weakness. Cessation from the very active life which he is accustomed to live has also naturally exercised an unfavourable effect on the Prince's general health. Since, however, he has been going about from place to place in the south of France with Prince George he has improved in general health and spirits. In fact, the most recent information from the south of France concerning the Heir Apparent is altogether reassuring, and he is said to be in better health now than he has been at any period since the death of the Duke of Clarence and Avondale. The statement about the "travelling clot" seems to be based upon a condition which arose during the now historical illness of the Prince of Wales. At that time he had an embolism, and that has caused the superficial veins to enlarge. Now and again he suffers from a slight phlebitis, which causes him some pain. Prince George is also better than when he left, though he still suffers from wakefulness and neuralgia. The Princess of Wales, who has suffered very much from shock and from natural grief, has in some degree recovered her spirits, and Princess Maud has recovered from her synovitis.

REVULSANTS AND THEIR EFFICACY.

DR. L. DEVOTO, in an interesting contribution to the *Gazzetta degli Ospetali*, shares Dr. Besson's conclusions as to the therapeutic value of "intense and rapid revulsion"—sinapisms, that is to say, in contradistinction to vesicants which represent the group of revulsants "permanent and slow." The former he finds useful in acute disease by their power of lowering the temperature, of slowing the heart's action, and of producing a general vascular dilatation. In chronic disease where is encountered a falling off of nutrition, "cutaneous excitation has the power of determining an acceleration of organic combustion," besides exercising a calmative effect, more or less enduring, more or less considerable, on the phenomenon of pain. In syncope, moreover, they re-establish pressure and arouse the cardiac function. As to the slow and feeble revulsion, of which the vesicant is nowadays almost the sole representative, Dr. Devoto's experience harmonises with that of Dr. Besson, for whom vesicants have but one indication—that of inducing anæmia of the subjacent tissue and relieving pain. In pneumonia their use is invariably negative or worse. They have no power over the pulmonary lesions or over its morbid symptoms. "They augment the hyperæmia, they favour the dyspnœa and hypostasis, they predispose to asphyxia, and while suppressing, it is true, the pain at a given point, they reproduce it at another." Not less useless has he found them in pleurisy, while in diabetes mellitus, he considers, they are absolutely contraindicated, equally so in aged subjects, in children, and, generally speaking, in all maladies the characteristic note of which is failure or feebleness of the powers.

THE ELEVENTH CONGRESS OF INTERNAL MEDICINE.

THE meeting of the eleventh Congress of Internal Medicine will take place at Leipzig under the presidency of Dr. Curschmann, from April 20th to the 23rd. The programme contains the names of many authorities of the highest order, and the subjects to be under discussion will be of much interest. Thus, Birch-Hirschfeld of Leipzig, and Ehrlich of Berlin, will read a paper on "Obscure Anæmic Conditions." Rosenstein (Leiden), one on "Chronic Inflammation of the Liver." Emmerich (Munich) will discuss the cause of immunity from infectious diseases, and Goltz (Strassburg) will give the results of observations made by himself and Ewald on the excision of large portions of the spinal cord in animals. Among the more eminent medical men who will take part in the Congress are Schott (Nauheim), Fürbringer (Berlin), Minkowski (Strassburg), Ebstein (Göttingen), Adamkiewicz (Krakau), Finkler (Bonn), Israel (Berlin), Klebs (Berlin), Buchner (Munich), Von Ziemssen (Munich), Löffler (Greifswald), Petersen (Copenhagen), and Unverricht (Dorpat). Paschmann (Vienna) will contribute a paper on "Influenza and its Relation to Dengue." Cornet (Berlin) will treat of Tuberculosis. Congress tickets can be obtained from Dr. Krehl, 31, Thalstrasse, Leipzig, for 15 marks, which will entitle to a copy of the Transactions. An exhibition of medical apparatus, instruments, and preparations will be held in connexion with the Congress in the theatre of the Crystal Palace.

RED CROSS CONGRESS IN ROME.

AN Italian correspondent writes: "I announced some weeks ago the international *festa* of the Red Cross in Rome to which representatives from all the signatory powers have been invited. The programme of the proceedings is now before me, and if the weather maintains the loveliness that usually characterises the month of April in central Italy, no material element will be wanting to success. On the evening of Wednesday, the 20th, the 'Congressisti' will be received in the Sala Umberto Primo, where the official presentations will follow. Next day, at 2 P.M., the inauguration of the International Congress will take place in the *salone* of the Palazzo dei Conservatori in the Capitol. The opening address will then be delivered by the president, Count Gian Luca della Somaglia, Senator of the Kingdom. To this a discourse in reply will be made by a delegat of the different foreign powers represented. On Sunday, the 24th, the King and Queen will entertain the congress at a banquet in the Quirinal Palace, and on the following evening there will be a 'serata di gala' (evening entertainment) at the Costanzi. Tuesday, the 26th, will be a very attractive day, on the evening of which there will be a grand reception of the 'Congressisti' in the galleries of the Capitoline Museum, illuminated for the occasion by flambeaux distributed among the *chefs-d'œuvre* of statuary standing out from a background of evergreens. The hosts

of the occasion will be the Syndic (the Duke of Sermoneta) and the municipal councillors. On the next day (Wednesday, the 27th) a special train will convey the 'Congressisti' to the falls of Tivoli. Arrived at that picturesque spot of the Sabine hills, the visitors will witness the improvisation of a 'treno ospedale' (hospital train), the transport of a mountain ambulance, and the disposal of all its departments on the Tivoli upland. Thereafter they will be entertained at a banquet of 150 covers in the superb Villa d'Este, kindly set apart for the purpose by his Eminence Cardinal Hohenlohe. Italy claims to have initiated the Red Cross movement, afterwards solemnly organised at Geneva under General Dufour, and on this occasion she will endeavour to show a hospitality which in another power would be neighbourly, but which in her case aspires to be parental."

SOURCES OF SYPHILITIC INFECTION.

DR. RASSLER, in his essay for the M.D. of the University of Kiel, makes a valuable contribution to the literature of syphilitic disease. The *Archiv für Dermatologie und Syphilis* states that Dr. Rassler undertook the labour of analysing 630 cases of syphilis treated in the medical clinic with the object of ascertaining the number arising from extra-genital infection. He found thirty-four such cases, comprising twenty-three of the lips, one of the tongue, two of the mucous membrane of the mouth, and three of the mamma. In three instances the primary sore occurred on the genital organs without connexion having taken place, and in the remaining two it was impossible to indicate the locality. The result of these investigations shows that 5 per cent. of all cases of syphilis are due to extra-genital infection. According to other authorities, the proportion varies between 1 and 10 per cent., except in certain parts of Russia, where the proportion is said to reach as high as 80 or 90 per cent.

THE CENSURE OF A WORKHOUSE MEDICAL OFFICER BY A JURY.

SOME time since we had occasion to notice the censure of the medical officer of a workhouse in the East-end on very insufficient ground by a jury for alleged inadequate attention to a dying patient. We expressed the opinion that the Local Government Board would ascertain the merits of the case, and see that its servants were fairly judged. This hope has been realised. The Board did not indeed make an inquiry, having found that there was no tittle of evidence against the medical officer, and, that being so, there was no ground for an inquiry as asked for by the board of guardians. The case affords another instance of the ease with which some boards of guardians and juries adopt a tone of censure towards medical men. It is gratifying to know that there is a court of appeal to which medical officers who are conscious of doing their duty can confidently look for fair judgment. It would be still more gratifying to be able to believe that guardians and juries will take a more reasonable view of the services of medical officers.

PARSIMONY OF PAROCHIAL AUTHORITIES ABROAD.

PARISH DOCTORS in all countries complain of microscopic remuneration for what in some cases is macroscopic labour. The Spanish parochial medical officers have recently been agitating more or less publicly for a better recognition of their services. The Belgian *médecin des pauvres*, too, does not seem to hold a very enviable position, if we may judge from a complaint that has just been published in *Le Scalpel*. From this it appears that the authorities of a certain manufacturing town containing a population of 8000, including 5000 working people, have offered the reduced amount of 1800 francs annually for attendance on the poor, including medicines and confinements. Hitherto the work has been divided between two local practitioners, who, although threatened with a public advertisement for a stranger, have agreed to decline the post. The authorities have carried out their threat, and advertised what at first sight seems a fairly attractive appointment for a young practitioner wishing to start in practice, yielding about five francs per diem; but for this an average of twenty-five visits is required, including, it must be remembered, confinements and medicines, which last cannot be bought, we believe, at wholesale druggist's prices, but must be obtained through a pharmacist. The "twopence gross earnings per visit" is really a ridiculous sum to offer; and it can only be hoped that no Belgian medical man, however young and inexperienced, will come forward as a candidate.

PHARMACY ACT PROSECUTIONS.

THE reality of the powers conferred under the Pharmacy Acts has lately received a very practical demonstration in Glasgow. In a number of cases prosecutions have been instituted at the instance of the Registrar under the Pharmacy Acts, Mr. Richard Bremridge; in all cases the offence consisted in the sale of poisons by a person who was not a duly registered chemist. No one can complain that the poisons were not fairly selected. They consisted of oxalic acid, red precipitate, chloroform, ergot of rye, tincture of opium, and opium. The fines imposed were heavy, being the full penalty in most cases, together with costs on a high scale. Practically there was no valid defence in any of the cases, although it seemed that there was an erroneous notion that if the shop was visited daily by a qualified man the Act had not been infringed. In one case it appeared that the respondent attended medical classes in Glasgow during the day, that his sister kept the shop, and that a doctor visited it three times a day and remained an hour each time. The real owner of the shop was the respondent's brother, who was a musician. A few more such prosecutions, carried to a successful issue, would do much to safeguard the public against the dangers of the sale of poisons by unqualified persons.

THE COSTLINESS OF FALSE CERTIFICATES OF DEATH.

WE noticed a short time since an inquest on the body of Susannah Elizabeth Walker of Holloway. The case has been further elucidated at the North London Police-court, before Mr. Haden Corser. On Saturday last Mr. David Hyman Dyte, of Derby-street, King's-cross, and Pooles'-park, Holloway, was summoned for issuing a false certificate of death in contravention of the Births and Deaths Registration Act, 1874. And Henry Smythe, his unqualified assistant, was summoned for using the said certificate, well knowing it to be untrue. Mr. Charles Townley, superintendent registrar for the parish of St. Mary, Islington, prosecuted for the Registrar-General. The allegations were that the poor at a provident dispensary at 43, Pooles'-park were seen sometimes by a lady and sometimes by Mr. Smythe, and if a death occurred, Mr. Dyte signed the certificate without having previously seen the case. Mr. Townley had four such cases, but only pressed the present one. Mr. Dyte, through his barrister, Mr. Lyon, admitted the offence, but excused himself in this case on the score of illness. Mr. Lyon did not strengthen his case by showing how Mr. Dyte, though not seeing dispensary patients, saw the notes of them by his unqualified assistant. Dr. Charles R. Drysdale testified to Mr. Dyte's professional and general character and great ability. This did not alter the opinion of the judge that the highest penalty should be inflicted—a fine of £10 or a month's imprisonment, and £1 13*s.* 6*d.* costs.

Mr. Smythe at first pleaded not guilty, and denied having seen the certificate. But on being pressed he begged to withdraw the plea of not guilty. Thereupon a medical practitioner of Forest-gate, spoke of more than twenty years' knowledge of him as apprentice and assistant. He considered Mr. Smythe more competent than many qualified medical practitioners. Such testimonials are in very questionable taste, and they have nothing to do with the question of two persons, one qualified and the other unqualified, combining to give a false certificate and to conduct an essentially false practice. There is a certain aggravation in men who ought to know better doing such things. Mr. Corser fined Mr. Smythe £5, with the alternative of fourteen days' imprisonment, and £1 13*s.* 6*d.* costs. We have no wish to add to the pain which Mr. Dyte must feel in being placed in such a situation. But there is one obvious aggravation of the situation—that it is without excuse, and after very ample and repeated warning. We have pointed out time after time the risk incurred by medical men doing their work through unqualified assistants and signing false certificates.

OFFICIAL ANALYST TO THE HOME OFFICE.

THE appointment of official analyst, which will shortly be made, deserves the most careful consideration of the authorities. The duties of the post are primarily chemical; at the same time, we are of opinion that a man should be elected who has a deserved reputation as a medical practitioner. A chemist pure and simple, however learned and skilful he may be in his special branch of science, must necessarily lack to a great extent the knowledge of the relation of the action of poisons to the physiological functions and anatomical structures of the body. General descriptions are laid down in the text-books of the symptoms of poisoning and the appearances resulting from toxic and irritant agents, but the "history of the variations," which is a most important point in the investigation of cases of alleged poisoning, requires a wide and varied knowledge to turn it to trustworthy, practical use—a knowledge that can only be obtained by one who is a toxicologist in the most comprehensive sense of the term.

FINE FOR NEGLECT OF NOTIFICATION.

THERE have been several instances lately of medical men being fined for not notifying infectious diseases. At Guildhall on April 8th a gentleman was summoned under Section 55 of the Public Health (London) Act, 1891, at the instance of the Commissioners of Sewers, for that, on or about Feb. 19th, being the medical practitioner called in to attend a patient in Fleet-street, on becoming aware that he was suffering from small-pox, he unlawfully failed to send to the medical officer a certificate. The discovery of the case was made afterwards, when application for disinfection was made. The practitioner pleaded that being busy and having affliction in his own family the matter slipped his memory. The defence was intelligible but insufficient, and a fine of 40*s.* was imposed.

EXPERIMENTS ON THE CORD.

IN a series of experiments carried out by Dr. Mott and published in the *Journal of Physiology*, of which an abstract appears in a recent number of the *Neurologisches Centralblatt*, he found that pricks with a needle evoked a less prompt response on the side on which the cord had been cut than on the opposite side. Other tests also seemed to show that sensibility to pain, temperature, and pressure was less on the side on which the cord had been divided. No loss of sensibility was found on the same side. The knee-jerk was at first lost, later it was exaggerated on the affected side. The restoration of a movement was in proportion to its bilateral character and the height of the section. Flexion returned before extension, and movements at the hip before those at the knee and ankle. Toe movements returned only in slight degree, but motor power in other respects had in the space of two months so much improved that only very careful observation could distinguish a difference between the two sides. In the first week after the operation considerable disturbances, apparently vasomotor in character, were present on the side on which the operation had been done. Stimulation of the right hind-limb centre in the cortex of animals in which the left side of the cord had been divided caused movements of both hind limbs. The secondary degenerations were those usually described and no crossed descending degeneration was found.

FOREIGN UNIVERSITY INTELLIGENCE.

Rostock.—Dr. Oscar Langendorff of Königsberg has been invited to accept the chair of Physiology vacant by the death of Professor Aubert.

Jena.—Professor Stintzing has temporarily taken charge of the Medical Clinic. Dr. Verworn of Berlin has been recognised as *privat-docent* in General Physiology.

Helsingfors.—Dr. Schulten has been promoted to the full Professorship of Surgery; Dr. Ayrapää has been appointed to lecture on Odontology; Dr. Pipping has been promoted to an Extraordinary Professorship of Children's Diseases; Dr. Hjalmar Bonsdorf has been appointed to a Lectureship on Surgery. A Dental Clinic has been established.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Adolf von Stein, at the age of eighty-seven. He had been at the head of the medical department of the Wurtemburg army, and had also written a good deal on comparative osteology.—Dr. Karl von Schroff, Professor of Pharmacology in the University of Gratz, at the age of forty-eight.—Dr. V. J. Antonoff, Ordinator of the St. Petersburg Municipal Hospital and author of various papers.—Dr. Pippinakjöld, Professor of Midwifery and Gynæcology in the University of Helsingfors. By his will he left £5000 for a lying-in hospital, £10,000 for the creation of a chair of physics, and £4000 to a widows' fund.

THE International Hydrological Congress, fixed to meet in Rome this year, has, by arrangement of its organising committee, been postponed till September, 1893, when the great International Congress of Medicine and Surgery will be held. The solidarity of the thermo-mineral department of the healing art, with the sister departments, will thus be recognised, to the great convenience of all who are interested in the newer as in the older developments of therapeutics.

WE regret to notice the death of Dr. Hayes Agnew of Philadelphia. Dr. Agnew was well known as a representative American surgeon; in this country he will be best remembered by the part he took in the treatment of the late President Garfield, and by his work on Surgery, which remains a monument of industry. He was a most enthusiastic teacher, and will be greatly missed from the chair of Surgery at the University of Pennsylvania.

A COURSE of instruction, clinical, anatomical, and pathological, is announced to be given at the Salpêtrière by Dr. A. Dutil, *chef de clinique*, and Dr. Paul Blocq, chief of the Pathological department, beginning on May 2nd. The course will be held four days a week for five weeks. The number of pupils will be limited. Application should be made to Dr. A. Dutil, at the Salpêtrière Hospital.

MR. F. J. M. PAGE, B.Sc., F.I.C., has been appointed to the chair of Chemistry and Physics at the London Hospital, rendered vacant by the death of Dr. Tidy.

IN Kazan there is an epidemic of typhus fever. More than ten of the medical officers of the hospitals have been attacked by the malady.

THE ROYAL COLLEGE OF PHYSICIANS.

THE Extraordinary Comitia held on the 11th inst. to elect a President was well attended. Before the election various matters of business had to be dealt with; but although these were numerous, they did not present any particular difficulty. A communication was received from the Home Office, acknowledging the address of condolence presented upon the death of the Duke of Clarence and Avondale. From the Foreign Office two communications were received: one suggesting a cure for snake-bites and a form of treatment for kidney disease; the other with reference to the practice of medicine by English practitioners in France. The latter was referred to the consideration of the committee. Communications were also received from the Colonial Office, and from the "Inebriates' Legislation Committee" of the British Medical Association. The College solicitors enclosed a printed statement of defence in the action now pending in the Chancery Division between the Royal College of Physicians (plaintiffs) and the General Medical Council (defendants), and it was announced that the case was now set down for hearing, and would, in all probability, come on next term. From the College of Surgeons a formal letter was received dealing with the question of fees to be paid to examiners, and with a small matter of detail connected with the schedule for examination under the new regulations for the five years' curriculum. Dr. Semon, on behalf of the Berlin Committee, presented to the College one of the Virchow medals struck on the occasion of the Virchow jubilee. The President announced that at the instance of the War Office a scheme for the examination of army medical officers had been drawn up conjointly with the Royal College of Surgeons, and had been forwarded to the War Office. A University Committee was appointed to consider and report from time to time on any proceedings relating to the formation of a university in London. The following representatives of the different medical schools were nominated members of this committee: Dr. Payne, Dr. Andrew, Dr. Pye-Smith, the Registrar (Dr. E. Liveing), Dr. Norman Moore, Dr. Allchin, Dr. Coupland, Dr. MacAlister, Dr. Mackenzie, Dr. Bruce, Dr. Cheadle, Dr. Priestley, and Dr. Barlow. The report from the Laboratories Committee was received; it indicated that there had been two new applications for permission to work in the laboratories, and that since the last quarterly report all but five who had previously been at work have applied for permission to continue their researches. Sir Andrew Clark then delivered the annual Presidential Address. At the outset he remarked that that portion which dealt with the history of the movement for the establishment of a new university in London as it concerned the College would be printed and circulated amongst the Fellows, even though he might not have time to read it. After referring to the great increase in the numbers of the Fellows, Members, and Licentiates during the past year, he spoke in feeling terms of the amount of labour that had fallen upon the Registrar, and the need, in the near future, of supplying him with some assistance. He made an appreciative reference to the work done in the laboratories, and also to the various lectures which had been delivered within the College. The arrangements which had been made for the revision of the Nomenclature of Diseases also received notice in passing. The cordiality of the relations existing with the Royal College of Surgeons and also with the various departments of Government was noted. The President then proceeded to sketch the careers of the following deceased Fellows: Sir Henry Cooper, Dr. Robert Martin, Dr. Henry Monro, Sir George E. Paget, Sir James Risdon Bennett, Dr. Henry Gawen Sutton, and Dr. William Henry Stone. The happiness of the eulogistic terms employed and the kindly appreciation evinced in most of these remarks elicited frequent applause. Passing to the questions at issue between the Royal College of Physicians and the General Medical Council, the President gave a brief account of the events which had led to the present difficulties and spoke with pardonable warmth of the action of the General Medical Council. Reference to the successful issue of the labours of the committee appointed to consider the five years' curriculum brought to a close an address marked by singular fluency and eloquence. The question of greatest interest to the College, the attitude assumed towards the proposed new University in London, must be considered at leisure when it appears in print, as it was unavoidably crowded out. The motion of a vote of thanks, moved by the Senior Censor and seconded by the Emeritus Registrar, was carried by acclamation. The election of President then took place. Sir Andrew Clark was elected for the fifth time, receiving 97 votes, there being 103 Fellows present, the remaining votes being divided between Sir Richard Quain, Sir Henry Pitman, Sir Dyce Duckworth, Dr. Wilks, and Dr. Sturges. It is a coincidence that the number of Fellows voting should be exactly the same as last year, when Sir Andrew Clark received 96 votes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5975 births and 4543 deaths were registered during the week ending April 9th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 24·8 to 22·2 per 1000, rose again to 23·3 last week. In London the rate was 22·2 per 1000, while it averaged 24·0 in the thirty-two provincial towns. The lowest rates were 12·3 in Croydon, 14·3 in Brighton, 15·4 in West Ham, and 16·0 in Birkenhead; the highest rates were 31·0 in Manchester, 31·1 in Oldham, 31·6 in Halifax, and 33·5 in Salford. The 4543 deaths included 493 which were referred to the principal zymotic diseases, against 435 and 427 in the preceding two weeks; of these, 172 resulted from whooping-cough, 163 from measles, 57 from diphtheria, 41 from scarlet fever, 31 from diarrhœa, 25 from "fever" (principally enteric), and 4 from small-pox. No fatal case of any of these diseases was registered in Plymouth; in the other towns they caused the lowest rates in Bradford, Gateshead, and Leeds, and the highest rates in Sunderland, Sheffield, Derby, and Wolverhampton. The greatest mortality from measles occurred in London, Sheffield, Birkenhead, Liverpool, and Wolverhampton; from scarlet fever in Preston and Cardiff; from whooping-cough in Hull, Derby, Sunderland, Blackburn, Sheffield, Salford, and Wolverhampton; from "fever" in Norwich and Preston; and from diarrhœa in Derby and Barnley. The 57 deaths from diphtheria included 34 in London, 4 in Sheffield, 2 in West Ham, 2 in Birmingham, and 2 in Wolverhampton. Two deaths from small-pox were registered in London, 1 in Croydon, and 1 in Halifax, but not one in any other of the thirty-three large towns; 39 cases of this disease were under treatment in the Metropolitan Asylum Hospitals, and 9 in the Highgate Small-pox Hospital on Saturday last, the 9th inst. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1289, against 1226 and 1227 on the preceding two Saturdays; 166 new cases were admitted during the week, against 126 and 139 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding three weeks from 523 to 430, further fell last week to 403, and were 26 below the corrected average. The causes of 75, or 1·7 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bolton, Leeds, Newcastle-upon-Tyne, and in nine

other smaller towns; the highest proportions of uncertified deaths were registered in Brighton, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding three weeks from 24·2 to 21·2 per 1000, rose again to 24·1 during the week ending April 9th, and exceeded by 0·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·6 in Leith and 18·9 in Perth to 23·2 in Aberdeen and 27·7 in Glasgow. The 671 deaths in these towns included 30 which were referred to whooping-cough, 14 to measles, 10 to diarrhœa, 5 to "fever," 4 to scarlet fever, 3 to diphtheria, and not one to small-pox. In all, 66 deaths resulted from these principal zymotic diseases, against 69 and 65 in the preceding two weeks. These 66 deaths were equal to an annual rate of 2·4 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 34 and 24 in the preceding two weeks, rose again to 30 last week, of which 17 occurred in Glasgow, 5 in Aberdeen, and 4 in Edinburgh. The deaths referred to measles, which had been 12 and 15 in the previous two weeks, declined to 14 last week, all of which were recorded in Glasgow. The fatal cases of "fever," which had increased from 4 to 8 in the previous three weeks, fell last week to 5, and included 4 in Glasgow. The 4 deaths referred to scarlet fever and the 3 fatal cases of diphtheria also showed a decline from the numbers in the previous week. The deaths referred to diseases of the respiratory organs in these towns, which had been 181 and 158 in the preceding two weeks, were 160 last week, and were slightly below the number in the corresponding week of last year. The causes of 66, or nearly 10 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 40·1 and 37·3 per 1000 in the preceding two weeks, further declined to 33·0 during the week ending April 9th. During the thirteen weeks of last quarter the death-rate in the city averaged 38·4 per 1000, the rate for the same period being 28·2 in London and 19·8 in Edinburgh. The 221 deaths in Dublin during the week under notice showed a decline of 29 from the number in the preceding week, and included 23 which were referred to measles, 3 to whooping-cough, 1 to scarlet fever, 1 to "fever," 1 to diarrhœa, but not one either to small-pox or diphtheria. In all, 29 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4·3 per 1000, the zymotic death-rate during the same period being 3·0 in London and 1·2 in Edinburgh. The fatal cases of measles, which had increased in the preceding three weeks from 12 to 24, were 23 last week. The deaths referred to whooping-cough, which had been 5 in each of the previous two weeks, declined to 3 last week. The fatal case of "fever" corresponded with the number in the preceding week. The 221 deaths in Dublin last week included 36 of infants under one year of age, and 59 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons slightly exceeded those recorded in the preceding week. Four inquest cases and 5 deaths from violence were registered; and 66, or nearly a third, of the deaths occurred in public institutions. The causes of 23, or more than 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

IT is reported that Surgeon-Major-General W. M. Webb will be Principal Medical Officer at Netley on the retirement of Surgeon-Major-General G. L. Hinde. Surgeon-Major-General Webb's successor in Bombay will probably be Surgeon-Colonel R. Lewer.

Brigade-Surgeon-Lieutenant-Colonel C. E. Harrison, of the Brigade of Foot Guards, has been selected to act as medical representative of the British Army at the Congress on Surgery to be held in Paris, commencing on the 18th inst.

ARMY MEDICAL STAFF.—Surgeon-Major-General James Sinclair, M.D., is placed on retired pay (dated March 28th, 1892); Surgeon-Colonel Charles Henry Young Godwin is seconded for service as Professor of Clinical and Military Surgery at the Army Medical School, Netley (dated March 10th, 1892).—The undermentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels (dated March 30th, 1892):—William Donovan; Dugald Blair Brown, F.R.C.S. Edin.; Richard Henry Quill, M.B.; Blennerhasset Montgomerie Blennerhassett, F.R.C.S.I.; William Budd Slaughter; Andrew Lang Browne, M.D.; Christopher William Moore Keys, M.D.; and Henry Haldane Stokes, M.B.—Surgeon-Major Thos. Joseph Gallwey, M.D., is seconded for service with the Egyptian Army (dated March 25th, 1892).

YEOMANRY CAVALRY.—North Somerset: Surgeon-Captain J. J. Saville to be Surgeon-Lieutenant-Colonel (dated April 13th, 1892).

VOLUNTEER CORPS.—*Rifle:* 2nd (the Weald of Kent) Volunteer Battalion, the Buffs (East Kent Regiment): Surgeon-Major H. B. Wood, M.D., to be Surgeon-Lieutenant-Colonel; to resign his commission; to be granted permission to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated April 13th, 1892).—2nd (Berkshire) Volunteer Battalion, the King's Own Scottish Borderers: John M'Watt, M.B., to be Surgeon-Lieutenant (dated April 13th, 1892).—2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Major E. M. Wrench to be Surgeon-Lieutenant-Colonel (dated April 13th, 1892).—1st (Pembrokeshire) Volunteer Battalion, the Welsh Regiment: John Henry Hywell Williams, Gent., to be Surgeon-Lieutenant (dated April 9th, 1892).

VOLUNTEER MEDICAL STAFF CORPS.—The Woolwich Division: Percy Octavius Haynes, Gent., to be Surgeon-Lieutenant, Supernumerary (dated April 9th, 1892).

Correspondence.

"Audi alteram partem."

ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editors of THE LANCET.

SIRS,—It gives me great pleasure to inform you that Her Majesty has been pleased to contribute £25 towards the funds of the College. The *imprimatur* of Her Majesty's approval of the efforts of the council to improve the condition of the College must surely stamp our scheme as being good.

May I not hope that such an example may induce many others to aid us, and enable us to make a securely improved position for our pensioners, and at the same time to extend and benefit our rapidly rising school? I would commend to the serious attention of your readers the idea of contributing a certain sum per annum for a term of years to this specific purpose.

I am, Sirs, yours faithfully,

April 9th, 1892. C. HOLMAN, M.D., Treasurer.

WELLINGTON COLLEGE SORE-THROAT.

To the Editors of THE LANCET.

SIRS,—Mr. Wickham is quite mistaken in supposing that I appeal to him for any opinion with respect to the nature of the three cases of sore-throat reported in THE LANCET of March 26th which occurred in his family. I pronounced them diphtheritic at the time, and treated them as such. The head master's house is so constructed that boys and others going to see the head master enter his business room or library by a side door approached by an open porch, and in that way have no necessity whatever to enter the portions of the house occupied by the head master's family. The importance of this arrangement in the event of infectious illness was fully realised by the present Archbishop of Canterbury and myself when the house was built. If, therefore, boys are exposed to infection during the occurrence of infectious illness in the head master's house, it can only be by a deviation from the usual order of things, for

which the medical officer cannot be held responsible if he is not made acquainted with it.

If Mr. Wickham doubted my diagnosis of the disease: First, why did he not mention his doubt at the time? Secondly, why did he not ask some other advice? Thirdly, why did he send for the sanitary engineer of the College to examine the drains, not only once, but a second time, till the source of the mischief was traced? Fourthly, why his great anxiety about the illness as exhibited in a letter I have, written to me at the time? But it was not only on the occasion referred to that diphtheria occurred in the head master's family. On another occasion it was diagnosed as such by another medical man who paid the first visit, acting as my deputy and on my general directions in the management of such cases. I have his note before me, from which I transcribe the following: "The eldest little Wickham has, I believe, got a diphtheritic throat, one tonsil having a large patch of that opaque-looking deposit on it. I have had her separated from the other children."

Mr. Wickham questions the nature of the illness referred to in my communication to THE LANCET of March 26th. But there can be no doubt about the gravity of the occurrence, as it impressed Mr. Wickham at the time. I have a note before me which I received from him late in the evening, from which I transcribe the following: "I asked Mr. Smith [the College architect and sanitary engineer] to come over and look at my drains, and he proposes to come by the 8.39 train to-morrow morning, and asks if you could manage to time your visit so as to meet him." In a postscript to the same note is the following: "Mrs. Wickham has had a very uncomfortable day . . . . I have not been able to get her to take more than half a tumbler of milk. You will judge if it is any use to see her again this evening." Two diseases only at that time that I am acquainted with—typhoid fever or diphtheria—could have so directed attention to the sanitary condition of Mr. Wickham's house, and typhoid fever was out of the question. Mr. Wickham knows that I, or indeed any other medical man, would do the very best for Mrs. Wickham and hers, not from a sense of duty alone, but being led thereto by her interesting character and disposition, and most angelic nature. No doubt the knotty point did arise whether the mother should continue to nurse her baby or not through her illness. The course I advised was not without precedent in my experience, and had the merit of being successful.

Sporadic diphtheria was not confined to Mr. Wickham's own family and Wellington College boys, but other persons and masters were attacked from time to time. There was difficulty in getting efficient quarantine observed. On one occasion an excellent but somewhat recalcitrant master, who chaffed at medical discipline, complained to the head master of my interference with the discharge of his duties. Mr. Wickham very properly upheld me on this occasion, and wrote as follows: "I have no doubt that you have done perfectly right in forbidding Mr. —— to go into school for another week; and I am very glad for his sake, as well as on the prudential ground of possible infection." These quotations, I think, can leave no doubt in the minds of your readers that diphtheria has in the past occurred in Mr. Wickham's house and elsewhere at Wellington College, and that due precautions were taken to guard against the spread of infection, which are the points raised by Mr. Wickham's letter in THE LANCET of April 2nd. Mr. Wickham's views respecting infectious illness at Wellington College differ materially from mine; but during the twenty-four years I attended at Wellington College the question never arose as to the dispersal of the boys, much less their withdrawal for a whole term; and I venture to think that had the medical system built up from experience during the head mastership of the present Archbishop of Canterbury been continued, the recent calamity would never have happened to the institution.

I am, Sirs, your obedient servant,

April 11th, 1892. J. G. BARFORD.

THE LONDON TEMPERANCE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I am instructed by the board of this hospital to convey to you the pain it feels on seeing a paragraph going the round of the whole medical press at home and abroad based on a statement made in THE LANCET, to the effect that ether is used in this hospital as a stimulant and as a substitute for alcohol, to which is sometimes added a reference to the danger incident to such a practice of producing a habit of ether drinking. The board directs me to emphatically and authoritatively state that no such practice is or ever has been carried on in this hospital, and that medicinally (that is, excluding its use as an anæsthetic) less ether is probably used here than in any other hospital in the United Kingdom. The board wishes me further to intimate that there is no occasion whatever for the substitution of ether for alcohol in any case, the members of our medical staff being entirely at liberty to administer alcohol medicinally if they consider such administration necessary. The statement which has gone forth is calculated to do great injury to this institution, and my board, therefore, cannot doubt that you will, in common justice, give to this letter the same publicity that was given to the paragraph of which it has such good reason to complain.—I am, Sirs, yours faithfully,

April 12th, 1892. E. WILSON TAYLOR, Secretary.

*** In THE LANCET of March 19th we inserted a letter from Dr. Ridge, in which the statement, published in the *Echo*, on which we had commented, was declared to be untrue. In an annotation in the same number of our journal we expressed the pleasure we felt in receiving and publishing Dr. Ridge's letter, and thus by implication, if not in so many words, endorsed the correction conveyed in that letter.—ED L.

THE INFLUENCE OF CLIMATE ON SURGICAL TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—A paper recently read by Dr. Theodore Williams before the Royal Meteorological Society dealt in a very interesting and able manner with the subject of climatology in relation to the health resorts on the Riviera and in Egypt, with special reference to their suitability for consumptive cases. Important as it is to have reliable intelligence of foreign sanatoria, it is, nevertheless, to be regretted that there is a tendency to overlook the fact that these distant and expensive resorts are, after all, accessible to a very small percentage of invalids, and that the great bulk of their less wealthy brethren are compelled to remain in England and find what warmth and sunshine they may during the winter months in the few sheltered nooks on our south-west coasts.

Writers on health resorts, spas, &c., are usually physicians, and they describe the advantages these places are reputed to offer to patients with diseases of a strictly medical nature. But surgical diseases, especially surgical tuberculosis and allied disorders, have hitherto received scant attention from writers on health resorts; the surgical mind unfortunately is just now more bent on studying the natural history of microbes than on the power of the patient to resist them. It is true that the good qualities of fresh sea and country air are readily recognised in theory, but as a matter of practice a very large proportion of cases are sent out of London and other large towns only as a last resource, after the inestimably valuable weeks of early treatment have been wasted in experiments with tonics, cod-liver oil, unavailing surgical treatment, and too frequently a useless course of poulticing. Any surgeon going round our wards at the Royal Sea-bathing Infirmary for Scrofula could not fail to be struck with these facts. We get cases in all stages except the preliminary stages, when fresh air gives the surgeon and the patient a chance: pale waxen children suppurating to death through sinuses of old excisions and amputations performed in the London hospitals with every possible antiseptic precaution, patients with hopeless spinal and joint disease who have languished for months and even years in the vitiated air of city hospitals and slums. It is almost pitiable to think how many of these cases could have been benefited or saved by operation or treatment in a suitable atmosphere with plenty of light and bracing fresh air. Studded along the coasts of England there are institutions ready to relieve the great cities of cases which no surgical skill can cure in a depressing and unhealthy atmosphere.

Physicians, when they are able, do not hesitate to send their consumptive patients out of London at the first sign of the disease, and do not dally with tonics and cod-liver oil. How is it that many surgeons are so slow to grasp the importance of the climatic treatment of tuberculosis &c.? Many joints will not mend on splints alone, nor will the knife, however skilfully wielded, be successful in a large proportion of cases when the constitution of the patient is impaired by want of fresh air. If surgeons wish to follow

up their cases, a short journey to the country ought not to be too great a tax upon their time, if they consider the extra chances to their patient of an operation or other surgical treatment in a favourable atmosphere. A fairly extensive experience of unnecessarily incurable cases that have drifted even to this corner of England induces me to write strongly on the matter, and every provincial surgeon will bear me out in my statements. The records of many apparently favourable results after operation appear in the statistics of London hospitals, but we have too frequently to "complete the case.' I trust that you, Sirs, may find room for this somewhat lengthy communication, in the hope that the important fact may be emphasised afresh, that the only chance of successful treatment of a large proportion of cases of surgical tuberculosis is to move them in their earliest stage from the vitiated air of the great cities to the sunlight and fresh air of the country.

I am, Sirs, yours faithfully,

Margate, April 9th, 1892. BERTRAM THORNTON.

INFLUENZA.

To the Editors of THE LANCET.

SIRS,—In a letter which appeared in THE LANCET of Jan. 23rd, I attempted to controvert the theory that influenza attacks chiefly the centres of the medulla oblongata by hinting that the symptoms which might be expected on such a theory were conspicuous by their absence in ordinary cases of the disease. It seemed unnecessary after this to point out that the usual symptoms of influenza in no way indicate a lesion of the bulb. What are the invariable symptoms in nine-tenths of the cases of the disease? Besides febrile symptoms of a somewhat indefinite and usually mild character, there is intense pain referred to the seat of the nerve centres and various muscles, together with extreme mental and physical prostration, nothing else. Surely no greater contrast could be imagined than between such a condition and that produced by lesions of the bulb. Is it not one of the most remarkable features in glosso-labio-laryngeal palsy that a patient whose days are few to live should retain his mental and physical activity and enjoy almost perfect immunity from pain?

As one who has advocated from the first appearance of the disease in 1889 that influenza does affect chiefly the nerve centres, I am the last one to deny that in exceptional cases the vital centre of the bulb may be affected; indeed there is little doubt that the causes of many of the unexpected fatal issues of the disease are due to the failure of the vital centres. Until we have reports showing that the great majority of patients dying from influenza present some constant lesion, I shall be content to believe that, whatever the specific change caused by the disease may be, that it is beyond the present methods of pathologists to discover. In the cases quoted by Dr. Althaus it will be seen that the more general the experience the more indefinite were the lesions found, and in no instance was any special change in the medulla noted that could be looked upon as primary. I do not think I shall be alone in considering influenza to have a depressing effect upon that ultra-microscopic condition of protoplasm which, for want of a better word, and in ignorance of its nature, is usually called its nutrition. The vital centres, as a rule, resist the action of the poison, but in exceptionable cases are paralysed by it. Then the vaso-motor centre appears to be most prone to the attack of the poison, more especially that part of it that controls the pulmonary and gastric circulations. The central nervous system generally is always profoundly influenced by the poison—more, probably, in its sensory and vaso-motor than in its musculo-motor aspects. The nerve endings also seem to be much affected by the poison, and, by an increase in their irritability, tend to exaggerate the effect of the morbid condition of the nerve centres.

I am, Sirs, yours faithfully,

March, 22nd, 1892. THOS. GLOVER LYON.

SMALL-POX ON BOARD A STEAMER.—The Anglo-American Telegraph Company's steamship *Minia*, from London for Halifax, which put in at Plymouth to coal and proceeded on her voyage on Thursday last, put back to Plymouth on the 10th inst., small-pox having broken out on board. She was visited by the port sanitary surgeon, and the patients removed to the Pique floating hospital for infectious diseases. The *Minia* has a crew of eighty men.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Medical Defence Union.

A MEETING of the Medical Defence Union (North of England Branch) was held in the council-room of the College of Medicine, Newcastle (kindly granted for the meetings of the Union). Dr. Philipson presided, and Mr. G. E. Williamson acted as hon. sec. The principal business was the election of small local committees in each of the large towns of Northumberland, Durham, Cumberland, and Westmoreland, to act in connexion with the branch and the council in Birmingham.

Proposed Memorial to the late Dr. Heath.

An influential meeting of professional and other friends was held on Friday last, in the library of the Royal Infirmary, to promote a memorial to the late Dr. Heath. The Mayor of Newcastle presided. The attendance would have been larger but for the inconvenient hour (to most practitioners) at which the meeting was called. It was shown that Dr. Heath had been associated as lecturer at the College of Medicine, and with the Royal Infirmary as surgeon and consulting surgeon, for about forty years. It was after some discussion decided to open a subscription for the purpose of the memorial, and also that it should take the form of the endowment of a chair in the University of Durham College of Medicine, and be styled the "Heath Lectureship in Anatomy." It was shown that this would accord with one of the objects Dr. Heath had at heart—namely, the endowment of certain chairs at the College sufficient to make the holders independent of private practice, and able therefore to devote their whole time to the study and teaching of their subjects. The following subscriptions were announced before the meeting closed:—The College of Medicine (in its corporate capacity), one hundred guineas; Drs. Philipson and Gibb, each fifty guineas; and about one hundred guineas in other subscriptions. Dr. Arnison was appointed treasurer, and Lieut. Fox, R.N., of the College of Medicine, Newcastle, hon. secretary.

Alnwick.

The sewerage of Alnwick not being in a satisfactory condition, the local board proposed alterations for its improvement and disposal. Towards the estimated cost the Duke of Northumberland made an offer of £1000. As this was more than twelve months ago, it appears that his Grace is dissatisfied with the delay of the local board in a matter of this nature, and he has written through his commissioner to the board to say that if the work is not proceeded with within a month's time the offer of the £1000 will be withdrawn.

Newcastle Hospital Sunday Fund.

A meeting of the Hospital Sunday Fund Committee of Management and Distribution was recently held, and an interim cash statement as to the collections in 1891 was presented, which showed that there was brought forward from the previous year £450, the collections in places of worship amounted to £2276 16*s.* 4*d.*, manufactories £2238, special contributions £76, with interest, making a total of £5061 19*s.* 8*d.*, the collections on the whole being the largest ever received.

The late Dr. Bruce.

An esteemed citizen of Newcastle, Dr. J. C. Bruce, died here last Tuesday. Dr. Bruce was widely known as a philanthropist and a learned antiquary, but perhaps best of all, outside his own city, as the author of a history of the "Roman Wall." Indeed, it has been well said that Dr. Bruce made the Roman Wall his own, and knew every yard of it, from the Tyne to the Solway. Although not a medical man, Dr. Bruce was intimately connected with our profession as a young man. With an idea of a future missionary life, he went through, at the University of Glasgow, the curriculum of chemistry, surgery, and anatomy. Soon after, owing to the death of his father, and complying with his parent's wish, he undertook the direction of a celebrated private school in Newcastle, the well-known "Bruce's Academy," which sent forth a very large number of pupils—Robert Stephenson and others—who became distinguished in their various walks in life. Dr. Bruce held several diplomas from learned bodies so far back as 1825–6, he was a B.A., and M.A. of his own University, and in 1853 it conferred its LL.D. upon

him. The University of Durham also conferred the same degree upon him, and he was a corresponding member or associate of a very large number of antiquarian and historical societies from Rome to America. As chairman to the governors of the Newcastle Royal Infirmary he was in constant touch with our profession, and indeed it is a question if an operator there could be more pleased with a successful result than was Dr. Bruce. It is to be feared that his zeal in the Royal Infirmary led to his death, although he was eighty-seven years of age. Sitting up at night writing its report, he allowed his fire to go out, and received a chill which led to a train of bad chest symptoms, which at his advanced age he was unable to throw off. He was attended by his own prominent pupils, Drs. Philipson and Arnison, and his remains were on Friday last followed to the grave by a concourse of citizens, including a large number of our profession; indeed, the whole city mourned his loss.

It is announced in our local papers that Professor Philipson has been nominated for the office of representative of the University of Durham in the General Medical Council.

Mr. Thomas Ironsides, the Kibblesworth centenarian, completed his 101st year yesterday (April 13th).

Newcastle-on-Tyne, April 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Proposed Botanical Institute in Glasgow.

SOME weeks ago a much-respected Glasgow lady, Miss Steven, died, leaving property valued at over half a million sterling vested in the hands of a board of trustees, to whom the widest discretion is given in the use of the money, the only restriction being that it is to be devoted to "charitable and educational" purposes. Already the trustees are overwhelmed with applications for help from every kind of charitable and educational institution in and near Glasgow. One of the most recent, and probably one of the most reasonable of these, is from Professor Bower, occupant of the chair of botany in the University. He points out that, while the city has recently purchased the Botanic Gardens, which are now used as a public park, the botanical department of the University has no proper home there, but is at present lodged in two small rooms and an attic in the University building in the garden. There is no class-room, and the laboratories are so small that the practical work has to be repeated three times daily to successive relays of students. The valuable herbarium lies nursed in an inaccessible attic. Professor Bower wants a new building in the Botanic Garden, which shall be under his own control, and which shall be provided with a lecture-room to hold about 300 persons, two large museums, and a central hall, herbarium, and laboratories and private rooms for the practical work of professor and students. He has advanced his scheme so far that he has sent the trustees a sketch plan of the proposed building. The building and fittings would cost £12,500, and a similar sum would be required to give an endowment of about £400, which it is calculated would meet all necessary expenses. The total sum which he wants, therefore, is about £25,000.

Utilisation of Parochial Hospitals.

There is a proposal on foot in Glasgow to extend the reform begun about a year ago in the City Parish Hospital, when nursing by untrained women aided by convalescent patients was given up in favour of attendance of a trained staff of nurses; it is now suggested that these large hospitals should be thrown open to students and practitioners, and that the tax-supported hospitals should thus, like the charity-supported infirmaries, be made available for clinical instruction and as training fields for practitioners. It is very sensibly suggested that a hospital so large would be better worked by a staff of non-resident visiting physicians and surgeons and by resident assistants, who would perform duties in all respects analogous to those performed in our general hospitals. An immense field would thus be opened up, and clinical material at present not at all utilised would be made available for teaching purposes. The best interests both of patients and ratepayers would also be served, while the increased number of hospital appointments at the disposal of qualified practitioners could not fail to raise the general level of experience and skill in the profession. A further alteration, scarcely to be dignified by the term "reform," is proposed by Mr. Macewen, who was for nearly a quarter of a century a leading manager of the Royal Infirmary—viz., that the charge of the thirty odd wards of the Royal Infirmary should be redistributed in such a way as to give only one ward (instead of two or three) to each surgeon or physician, and that, further, the honorarium paid to the staff should be discontinued.

Hypnotism.

Dr. Kingsbury of Blackpool visited Glasgow lately and gave several very interesting demonstrations in the Royal and Western Infirmaries of what may be done by this mode of treatment. He also addressed a large and attentive audience of medical men, who on the invitation of the President, Dr. Yellowlees, met in the hall of the Faculty of Physicians and Surgeons. Dr. Kingsbury made a favourable impression as an honest and straightforward exponent of this practice, and his statements did much to rob it of the mystery in which it is often wrapped. He succeeded at the meeting in throwing a male patient suffering from neuralgia into a deep "hypnotic sleep," with no benefit apparently at the time, however, so far as pain was concerned.

April 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Breach of the Pharmacy (Ireland) Act in Cork.

THE recent prosecution by the Irish Pharmaceutical Society in Cork has drawn attention to the necessity which exists of having some alteration in the law by which a qualified member of the Pharmaceutical Society either of England or Ireland may use his calling in both countries at will. Mr. Selkirk has been fined £5, the magistrates expressing their regret, and suggesting that he might appeal if he so desired. There is, however, not much likelihood of this occurring, as the law bearing on the matter is distinct and definite.

Cork Poor-law Medical Association.

At a meeting of the Association, held last Saturday, reference was made to the deputation of the profession whom the Chief Secretary for Ireland refused to receive, as he did not approve of the Superannuation Bill. The chairman (Dr. D. Flynn) suggested that Sir Walter Foster should use his influence with the Chief Secretary to obtain from the Local Government Board the benefit of an annual holiday. Dr. Murphy handed in a notice of motion that at the next meeting he would move that meetings be held in remote parts of the country, in order to come in touch with some dispensary doctors who have not joined their Association as yet, and that the president and secretary attend at those meetings, the date of which would be fixed at a future period.

Cork South Infirmary.

At a meeting held on the 8th inst. the trustees of this hospital adopted the following resolution: "The resignation of Dr. W. C. Townsend having been presented to the trustees of the South Charitable Infirmary and County Hospital, in accepting it the board of trustees deeply regret the severing of Dr. Townsend's connexion with the hospital as senior physician, which he has held for so many years with great honour to himself and benefit to the patients committed to his care. We, the trustees, beg to place on record our sincere thanks to him for his constant and unsparing attention to his duties, and at the same time request that he will accept the position of consulting physician to the hospital, which the trustees have great pleasure in offering him."

Belfast Queen's College: Students' Union.

A private meeting of gentlemen in favour of the establishment of a students' union in connexion with Queen's College, Belfast, was held at the College on April 5th. The president, who has initiated the movement, stated that the want of a students' union had long been felt at the College, such as existed in Cambridge, Oxford, Edinburgh, &c., and many considered that the time had now come when a building should be erected, containing a dining-room, debating hall, recreation rooms, and also apartments where the various students' societies could hold their meetings. The jubilee of Queen's College will take place in 1895, and the president thought this would be a fitting time to open the new union. Several gentlemen at the meeting

having expressed themselves as strongly in favour of the establishment of the building, which would serve as a bond of union amongst the various students, it was decided to hold a public meeting in May, when the scheme will be formally launched. A small committee has been formed to carry out the preliminary arrangements. Mr. Thomas Sinclair, M.A., Belfast, a very distinguished graduate and warm friend of the College, has consented to act as treasurer, and already, through the praiseworthy exertions of the president, over £1100 have been promised. There can be no doubt that a students' union would be of very great advantage in many ways to those attending the College, and to none more than to the medical students. Owing to the long distances between the hospitals and the College and the city, many students are obliged to leave their lodgings early in the morning, and from that time until after five or six o'clock in the evening they are unable to dine. A students' union would obviate this difficulty, it would afford a place of rest for them between lectures, and would form a social bond of union—an element of no small value in a university.

Close of the Winter Session in Belfast.

The winter session at the hospital came to a conclusion on Saturday last, and it will terminate this week at the College. The examinations of the Royal University will begin in Dublin on April 20th and terminate on May 5th.

A series of entertainments in aid of the funds of the Dublin Orthopædic Hospital will be held in the Ancient Concert Rooms during the Easter holidays.

April 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

French Ophthalmological Society.

THE annual session of this Society will be inaugurated in Paris on May 2nd, when reports on the following subjects will be made by MM. Dor of Lyon, and Armaignac of Bordeaux respectively: (1) Treatment of Congenital Cataract; (2) Ophthalmoplegia.

How Quacks are punished in France.

Owing, I presume, to the sedentary nature of their occupation, shoemakers of all nationalities have from time immemorial been noted for intellectual originality, and most people can recall instances of a cobbler contravening the advice embodied in the precept enjoining him to "stick to his last." The above reflections were suggested by an incident reported in a medical journal. A worthy member of the cobbling confraternity of Havre had acquired considerable notoriety as a healer; he encountered no difficulty in imbuing the public of that flourishing port and its neighbourhood with the belief in his alleged miraculous powers. He claimed to be endowed with the faculty of prying into the secrets of the working of that part of the human economy which his patrons would probably lump together under the vague denomination "inside." To him the tegumentary and other coverings that hide these mysteries from the gaze of ordinary mortals were as transparent as glass. Not only this, but it appears that his horny hands are attracted unerringly to any part of the system that is diseased, and that such palpation remedies, *sans faute* and instantaneously, the morbid condition. These unorthodox doings having been brought to the notice of the authorities, proceedings were instituted against the ambitious worker in leather. The Tribunal Correctionel gravely deliberated over the case, two sittings being devoted to the consideration of testimony tendered by numerous individuals who had been cured offhand by this "suggestionist." If we may believe a young lady named Wolff, our eminent *confrère*, Professor Charcot, must henceforth be content to occupy a "back seat," for did not the poor shoemaker of Havre succeed in completely curing her of paralysis, whilst the celebrated neurologist of the Salpêtrière had ignominiously failed to afford her any relief? Unmoved, however, by this flattering evidence, the court decided to make an example of this unauthorised benefactor of humanity, and accordingly inflicted the tremendous penalty of—a fine of ten francs! Who shall now say that a prophet, whether he be a tinker, tailor, or cobbler, is without honour in his own country?

The so-called Parrot Epidemic.

For the last fortnight or so the lay and medical press has been publishing details of an alarming epidemic which broke out in three different centres in Paris. The disease was supposed to be a special form of epidemic pneumonia, and it was assumed to have been imported from Buenos Ayres through the medium of a cargo of parrots brought from that port by two Paris traders. Dr. Dujardin-Beaumetz has now completed his investigation of the occurrence, and he exculpates the parrots, and states that we have had to deal with a pneumonic form of influenza. The only part taken by the parrots is probably the conveyance of the germs on their plumage. Several patients have succumbed to the disease, as also many of the parrots, but the surviving parrots are in a good condition.

Paris, April 12th.

Obituary.

WM. IRVING, M.D., L R C.S.EDIN., J.P.

THE death of Dr. Irving removes from East Lancashire the oldest and most widely known physician in that district. He graduated in Edinburgh University in August, 1843. He also became a Licentiate of the College of Surgeons of Edinburgh in the same year. After a preliminary assistancy in Wolverhampton, he commenced practice at Blackburn in 1844. His attention to his patients and marked ability soon gained him a large *clientèle*, whose confidence and friendship he retained to the last. Although Dr. Irving's opinion as a consultant was sought by his professional brethren as well as by the rich and the lowly on account of his acuteness, clearness, and perspicacity in diagnosis, yet notwithstanding this and the opportunities he enjoyed as consulting physician to the Blackburn and East Lancashire Infirmary—an appointment which he held from its foundation—he left no writings behind him. Remarkably sociable, he preferred the company of his friends, the gun and the chase, as a means of relaxation rather than the quill. He was made a magistrate for the county of Lancaster on Dec. 1st, 1884. The funeral took place on Tuesday at St. Mary's, the parish church. All along the route the inhabitants showed their respect for the deceased by drawn blinds. Twenty-two private carriages joined the mournful *cortège*. It may truly be said of him that he made many friends and few enemies, and that he maintained the principle throughout life of not letting his left hand know what his right hand did.

J. W. TRIPE, M.D.

A VETERAN contemporary sanitarian has just been laid to rest in the person of the well-known Dr. Tripe. He had held the important post of health officer for Hackney for the last thirty-six years, having been the first officer to be appointed. Dr. Tripe had done excellent local work in the sanitary improvement of the large and populous area committed to him. But he was widely known outside these limits. He had filled the honourable position of President of the Society of Medical Officers of Health, and his sanitary and epidemiological writings were well known. In this latter connexion, Dr. Tripe published an interesting series of papers on epidemic waves. He also rode a tilt against the Homerton Small-pox Hospital, and his views found corroboration in the findings of the Hospitals Commission. Some later views of his as to the spread of fever from Fever Hospitals did not, however, command general acceptance. Altogether, a notable figure, whom it will be difficult to replace, has left our ranks.

THE INFIRMARY, OLDHAM.—The twentieth annual report of this charity, just issued, is a satisfactory record of the good work done during the year 1891. The experiment of providing qualified nurses to attend surgical cases outside the infirmary had worked well. 4577 patients had been treated at the infirmary in the course of the twelve months, and the convalescent homes were utilised for the benefit of thirty-seven patients. The adverse balance of £781 2*s.*, brought forward from 1890, had been reduced to £711 17*s.* 2*d.* The Hospital Saturday collection showed an increase of £154 5*s.* 11*d.* A munificent donation of £10,000 was received during the year from Mr. Eli Lees, of which £9000 had been invested in public securities. The endowment fund amounted to £31,773 1*s.* 4*d.*

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on the 7th inst.:—

Anatomy and Physiology.—Arthur H. Evans, of Westminster Hospital; Philip N. Vellacott, Thomas M. Thomas, Henry A. Moffatt, Arthur E. Philipps, Charles H. Fagge, William S. Handley, Francis J. Steward, and Richard F. Clark, of Guy's Hospital; Robert M. Le H. Cooper and Reginald J. E. Hanson, of St. Mary's Hospital: Walter E. Dixon and Harry A. Bull, of St. Thomas's Hospital; A. Woodward, George H. Sowry, and Ernest H. Fryer, of St. Bartholomew's Hospital; Frederick T. D. Clindening, of Adelaide University and St. Bartholomew's Hospital: Percy J. Edmunds, George B. Hunt, and William R. Nattle, of University College; William B. Butler and Ferdinand C. H. Muggleton, of London Hospital; William R. Coldicott, of Charing-cross Hospital.

Physiology only.—Frederick P. Duncan, of University College; Chas. Mathews and Lionel T. Wells, of St. Mary's Hospital; William H. Farmer, of St. Bartholomew's Hospital; John Gardiner, of Middlesex Hospital; William T. Dempster, of King's College; Henry N. Robson, of St. Thomas's Hospital.

Physiology only.—Stewart R. Douglas, of St. Bartholomew's Hospital.

(Seven candidates were referred in both subjects; one in Anatomy only and five in Physiology only.)

Passed on the 8th inst.:—

Anatomy and Physiology.—Forbes Fraser and David B. Keown, of St. Bartholomew's Hospital: Charles M. Beadnell, Horace Pern, and Sydney G. Graham, of Guy's Hospital; Fairman R. Mann, of Middlesex Hospital; Gwilym P. W. James, of University College; Angelo Gooding, of London Hospital; Percy M. Smith and John L. Davies, of St. Mary's Hospital; Conrad C. J. Erhardt and Frank H. Jacob, of King's College; Reginald C. Gayer, of St. George's Hospital; William C. D. Hills, of Charing-cross Hospital; Sydney G. Tippett, of Westminster Hospital.

Anatomy only.—Burroughs M. Hughes and Bertram J. Collyer, of St. Bartholomew's Hospital; James Robertson, of Guy's Hospital; Frederick Moreton, of Westminster Hospital; James G. Fowler, of London Hospital; Thomas S. Farncombe, of Trinity College, Toronto, and Mr. Cooke's School of Anatomy and Physiology; Fred. W. Waters, of St. Thomas's Hospital; William A. Bernard-Smith, of King's College; G. M. Bennett and Henry C. Clark, of Middlesex Hospital.

Physiology only.—William Herbert and Howard P. Kennard, of St. Thomas's Hospital; Robert W. Jamerson, of St. Bartholomew's Hospital; John J. Winn, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; C. N. Barton, of St. George's Hospital; Roderick Sim, of Middlesex Hospital.

(Two candidates were referred in both subjects; nine in Anatomy only and thirteen in Physiology only.)

Passed on the 9th inst.:—

Anatomy and Physiology.—John G. O. H. Lane, Harold B. Stoner, Charles J. Harnett, Harry M. Wise, John R. Steinhaeuser, and Daniel W. Thomas, of Guy's Hospital; James H. Hugo, Matthew W. S. Isacke, Edward Morris, Thomas P. Legg, and J. H. Meacher, of St. Bartholomew's Hospital; Alfred P. Coker, Ernest E. Ellery, and Michael B. Pinchard, of Middlesex Hospital; Frank G. Layton and Percy W. Kent, of St. Thomas's Hospital; Dudley R. N. Bernhardt, of St. George's Hospital; R. L. Dickinson, of London Hospital; John C. Smellie, of St. Mary's Hospital; Edward L. M. Rusby, of King's College.

Anatomy only.—Charles C. Jenkins and Percy E. Tressider, of Guy's Hospital; Thos. Hood and David Lewis-Jones, of St. Bartholomew's Hospital; Edward Haines and William Ashford, of St. Thomas's Hospital; David C. Kemp, of University College.

Physiology only.—Augustus C. Greenwood, of Middlesex Hospital; John A. K. Griffith, of University College.

(Seven candidates were referred in both subjects; two in Anatomy only and seven in Physiology only.)

Passed on the 11th inst.:—

Anatomy and Physiology.—Maurice G. Pearson, Arthur Pain, John S. Stevenson, Arthur E. Druitt, and A. H. Clarke, of St. Bartholomew's Hospital; Clarence H. Mott, Frank H. White, and Joseph Cohen, of London Hospital; Ernest E. Head, of King's College; Clement E. Covernton, Bernard G. Reynolds, and Frederick S. Brereton, of Guy's Hospital; Edmund L. Perry and William H. J. Paterson, of St. Thomas's Hospital; John E. P. Davies and Sydney P. James, of St. Mary's Hospital; Charles H. J. Robinson, of Middlesex Hospital; Sidney E. Shoppee and Charles S. Read, of University College; George B. Clarke, of Charing-cross Hospital; John R. M. Forsyath, of Westminster Hospital.

Anatomy only.—Henry A. Hall, of St. Mary's Hospital; Samuel B. Blomfield and Arthur E. Peake, of Westminster Hospital; Walter A. Sharpin and Robert C. Martin, of St. George's Hospital; William H. Pope, of St. Bartholomew's Hospital; William F. Byford, of Guy's Hospital.

Physiology only.—Arthur R. H. Skey and Thomas S. Pigg, of St. Bartholomew's Hospital.

(Six candidates were referred in both subjects; two in Anatomy only and seven in Physiology only.)

Passed on the 12th inst.:—

Anatomy and Physiology.—George Phillips, Arthur Hunnard, J. Coote Hilbert, William Roberts, and Robert M. Johnston, of University College; Cecil A. Ensor, Edward T. Scowby, and Benjamin A. Richmond, of Guy's Hospital; Charles R. Watson, Frank Morley, Robert M. Ellis, and Boghas B. Tahmisian, of St. George's Hospital; Francis S. Tidcombe, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; George F. S. Genge and Henry Morris, of Westminster Hospital; Joseph E. G. Calverley, Arthur W. R. Cochrane, Frank M. Burnett, John F. Bill, and Arthur H. Morris, of St. Bartholomew's Hospital; William D. Frazer and Robert G. Strange, of St. Thomas's Hospital; Arthur P. Gibbons and Cyril B. Howse, of London Hospital.

Anatomy only.—Edward G. Moon, of St. Mary's Hospital; William A. Carden, of Guy's Hospital; Montagu H. C. Palmer, of London Hospital; Arthur A. Rogers, of St. Bartholomew's Hospital.

(Eight candidates were referred in both subjects, and four in Physiology only.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was, at the ordinary meeting of the Council on the 7th inst., admitted a Fellow of the College:—

Paton, Edward Percy, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital; diploma of Member dated Aug. 1st, 1889.

CAMBRIDGE UNIVERSITY.—The following candidates have satisfied the Examiners in both parts of the recent examination in Sanitary Science:—

Bamber, C. J.	Jones, J. H.
Davison, T. H.	Roe, W. A. C.
Elliot, R. H.	Semple, D.
Fligg, W.	Taylor, J. M.
Foster, W.	Taylor, M. H.
Hadley, W. J.	Thresh, J. C.
Hodges, W.	Trevor, E. T.
Hyatt, J. T.	Weir, G. W.
Jones, A. L.	

UNIVERSITY OF GLASGOW.—The following gentlemen have passed the Third Professional Examination for the degree of M.B. and C.M.:—

A, including Pathology.—William Cassels, James Cochrane, Peter Forrest Dewar, George Edgar, Alfred Forrest, M.A., Andrew Graham, Ernst Denny Scott Heyliger, William Munn Hunter, Neill Keith, Robert M'Farlane Marshall, James Robert M'Cheyne Miller, M.A., William M'Call, George Nicoll, Peter Rankin, James Bryce Robertson, John Davidson Smith, John Barr Stevens, James Thomson, Peter Thomson, Henry William Williams, James Murray Young.

B, not including Pathology.—Thomas Barrowman, Duncan Francis Brown, Allan Cameron, Vivian Ernest Chang, Thomas Colvin, William Copland, George Alexander Eadie, Edward Arthur Eckersley, John James Fraser, Thomas Adams Stewart Gibb, Alfred Alex. Cumming-Grant, David Fraser Harris, B.Sc., William Irwin, James Ritchie Jeffrey, Alexander Kelso, David Millar King, Robert Langmuir, M.A., Thomas Burns Marshall, James Binnie Millar, John Munro, Duncan MacDonald, James M'Kee, James Morton MacLauchlan, Balfour Stewart Nicholson, John Paxton, Alfred Fred. Septimus Pearcey, Peter Patton Petrie, M.A., Allan Ramsay, Hugh Robertson, John Selkirk, M.A., William Northcote Sime, Johnson Marion Smith, Nathaniel Stevenson, M.A., John Provand Thomson, David Wallace, Alfred Webster, Alexander Grieve Young.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the First Professional Examination:—

M. Carraher, M. J. Carroll, C. J. Cavenagh, M. Corry, H. E. Deakin, G. H. Fisher, P. J. Fitzsimons, H. Herrick, J. R. Hewitson, E. C. Hodgson, E. J. Hogan, M. Hurley, D. Jones, W. Lawlor, E. J. Lynch, M. R. Moore, J. McCarthy, B. McCaul, J. A. Neary, D. O'Brien, J. Thomson, and F. Wise.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed the recent primary examination in the respective subjects:—

Part I.

Chemistry, Materia Medica, Botany, and Pharmacy.—W. S. Robinson, Queen's College, Birmingham; L. M. Yardley, Royal Free Hospital.

Chemistry.—F. T. Knott, Guy's Hospital; E. Wright, Queen's College, Birmingham.

Materia Medica, Botany, and Pharmacy.—H. E. Davis, St. Thomas's Hospital; E. C. B. Ibotson, Guy's Hospital.

Pharmacy.—E. H. Forgett, Edinburgh University; L. Macrae, King's College and Glasgow; W. Taylor, Queen's College, Birmingham.

Part II.

Anatomy and Physiology.—C. J. Barnes, King's College; A. D. Clark, St. Bartholomew's Hospital; J. L. Davis and S. J. Haylock, St. Mary's Hospital; K. M. Hauter, Royal Free Hospital; E. C. B. Ibotson, Guy's Hospital; R. W. Middleton, Yorkshire College, Leeds; E. G. Moon, St. Mary's Hospital; R. A. McW. Robinson, Belfast; J. J. Speans, London Hospital; P. R. Wallis, University College.

Anatomy.—W. E. V. Gould, Queen's College, Birmingham; T. Gregg, St. Bartholomew's Hospital; J. B. Hodgson, Manchester and Glasgow; J. E. Jones, London Hospital; L. J. K. Lake, King's College; B. H. Leigh, Owens College; S. E. H. Martin, Royal Free Hospital; T. J. M'Culla, London Hospital; A. P. Square, Middlesex Hospital; J. R. D. St. Cyr, St. Bartholomew's Hospital; J. H. E. Trout, Queen's College, Birmingham; J. J. Winn, London Hospital.

Physiology.—J. T. Brickwell, Guy's Hospital; A. H. Bygott, Queen's College, Birmingham; H. Clapham, Sheffield; R. N. De Beauvais, Aberdeen; A. E. Freer, St. Mary's Hospital; A. R. McCullagh, Charing-cross Hospital; W. E. Pain, Guy's Hospital; C. J. Underwood, Charing-cross and London Hospitals; A. Wheeler, Edinburgh.

THE yellow fever in Brazil is reported to be further spreading from the Brazilian coast to the interior. The principal victims are said to be Germans, English, Swiss, Austrians, and Swedes.

INFLUENZA AMONGST HORSES.—A serious epidemic of influenza is reported to exist amongst horses in London. It is stated that the outbreak is more virulent than any which have preceded it.

HOMES FOR WORKING BOYS IN LONDON.—The Princess Christian has consented to lay the memorial stone of a new City Home for Working Boys on June 15th, attended by the Lord Mayor. The home has been carried on at 30, Spital-square for twenty-one years, doing a most useful work amongst lads engaged in the City. The building and freehold will cost £9500, towards which £3200 has been subscribed by the committee and a few friends. The home is one of eight known as Homes for Working Boys in London. The Hon. T. H. W. Pelham is treasurer, and the office is at 18, Buckingham-street, Strand, W.C.

THE GENERAL PRACTITIONERS' ALLIANCE.—A general meeting of the members of the above Society was held at Exeter Hall on Tuesday, April 5th, George Brown, M.R.C.S. (President), in the chair, to consider the proposed Royal Charter to the Royal British Nurses' Association. The following resolution was proposed by Dr. G. J. Eady, seconded by Dr. F. H. Alderson, and carried unanimously:—"That this meeting of the General Practitioners' Alliance considers that the registration of trained nurses is a measure which is calculated to protect the sick against untrustworthy nurses, and will be of much advantage to medical men by affording them ready and reliable information as to the training and experience which nurses have received. This meeting, therefore, believes that it would be for the public welfare that the Royal British Nurses' Association should be incorporated by Royal Charter, and requests the president of the Alliance to forward a copy of this resolution to the Lord President of the Privy Council."

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Major Barker of Wakefield bequeathed £2000 to the Clayton Hospital, Wakefield, £1000 to the Albert Asylum, Lancaster, £200 to the Scarborough Sea-bathing Hospital, and £100 to the Lock Hospital, London. Miss Louisa H. F. Bennett, late of Florence, bequeathed £6000 to the Manchester Royal Infirmary, £1000 each to the Middlesex Hospital and St. Thomas's Hospital, London, £3000 to the Hospital for Consumption, Brompton, £2000 to the Cancer Hospital, Brompton, and £5000 to the British Home for Incurables, for the purpose of founding a ward to be called the "Hannah Fawsett Bennett" Ward. The late Mr. Oliver Heywood of Manchester bequeathed £5000 to the Children's Hospital, Pendlebury, £3000 to the Salford Royal Hospital and Dispensary, and £2000 to the Manchester Infirmary. The treasurer of the Salford Royal Hospital has received a legacy of £500 from the executors of the late Mr. J. Hampson of Kempsford. The Goldsmiths' Livery Company has made grants of £250 and £500 to the Westminster Hospital and the Middlesex Hospital respectively. The following bequests have become payable by the death of Dr. George Miller of Glasgow:—£300 each to the Royal Infirmary and Western Infirmary, £200 to the Victoria Infirmary, £100 to the Royal Hospital for Sick Children, and £200 to the Colquhoun Bequest Fund for Incurables—all of Glasgow. The late Mr. William Blanchard of New Hampton bequeathed £500 each to the Richmond Hospital and the Teddington Hospital, £200 each to the Dispensary, King-street, St. James's, and the French Hospital, £100 each to the Hospital for Diseases of the Throat, Golden-square, to the Hospital for Diseases of the Skin, Leicester-square, to the Hospital for Consumption, Brompton, and to the Convalescent Home, Weybridge. Mr. George C. Ash, late of Maida Vale, bequeathed £500 each to the St. Mary's Hospital, Paddington, Middlesex Hospital, Charing-cross Hospital, University College Hospital, London Fever Hospital, King's College Hospital, Royal Free Hospital, London Hospital, Westminster Hospital, and the Hospital for Consumption, Brompton. The late Mr. Chas. H. Wagner of Birmingham bequeathed £500 each to the Birmingham and General Hospital and the Queen's Hospital, Birmingham, £300 to the Birmingham General Dispensary, £100 to the Children's Hospital, Birmingham, and £50 to the German Hospital, London.

SMALL-POX IN DORSET.—Small-pox, which broke out last week at the Union Workhouse at Shaftesbury, is reported to be spreading, notwithstanding the most stringent precautions.

MEDICAL MAGISTRATE.—The name of George Henry Browne, L.R.C.P.Edin., L.F.P.S.Glas., has been placed on the Commission of the Peace for the county of Brecon.

HOSPITAL SUNDAY FUND.—The late Dr. H. Elthington Price, of No. 1, Tisbury-road, West Brighton, left a legacy of £105, free of duty, to the Hospital Sunday Fund.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the fund, held on the 12th instant, T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £80 was distributed among the several applicants.

TWO Tartars in the neighbourhood of Kazan have been sentenced to twelve years' penal servitude for the murder of a little girl of six years of age. They had cut out her heart to give it to a sick person to eat, as a human heart had been prescribed by a mullah!

COUNTY COURT ACTION AND COUNTER ACTION.—Messrs. Mason and Smith, surgeons, in the St. Austell's County Court, brought an action against Mr. Alfred Warne, and were met by a counter-claim for negligence and unskilful surgery and damages for £50, their claim being for £7 12*s.* 6*d.* Fortunately, the defendant had a sensible solicitor, who saw that there was no evidence in favour of the counter-claim and withdrew it. His lordship gave a verdict for the plaintiffs, with costs.

THE QUEEN AT HYÈRES.—In recognition of the interest manifested by the members of the British colony in the Infant Asylum at Hyères, the committee of the institution have solicited from the Queen permission to designate the bed last established by the name of some member of the Royal family. The Queen, in reply to this petition, has remitted a sum of money sufficient to instal four additional beds in the hospital, signifying at the same time her wish that they should respectively bear the names of Queen Victoria, Princess Beatrice, Duchess of Connaught, and Princess Margaret Victoria of Connaught.

MEDICAL NOTES IN PARLIAMENT.

Small-pox in London.

IN the House of Commons on Monday last Mr. Ritchie, replying to Mr. Talbot, said: I have been strongly impressed with the great importance of the local authorities taking the most energetic measures with the view of preventing the spread of infection when these cases occur, and in May last I wrote to the vestry of the parish of Shoreditch and to the several other vestries in the metropolis asking them specially to instruct their medical officer of health in every case of small-pox which might be notified to him, or which might come to his knowledge, immediately to visit the house where the disease had broken out, and at the earliest possible moment to take such measures as might be necessary to secure as far as practicable the isolation of the patient, the vaccination of any persons who might have been exposed to infection, and the disinfection of the premises, and any further action which the circumstances admitted of for the purpose of checking the extension of the disease. I am informed that the medical officer of health reported to the vaccination officer the outbreak of small-pox in the two houses referred to, and that the vaccination officer immediately visited the inmates and urged them to obtain vaccination and revaccination. Unfortunately his warning appears to have been disregarded. I learn that an arrangement has been made for vaccination daily of urgent cases by one of the public vaccinators of the parish. With respect to revaccination, there is no law under which this can be enforced. As regards vaccination, I am strongly impressed with the responsibility of parents who neglect to have their children vaccinated, and of the local authorities who fail to put in operation the law as to the enforcement of vaccination, especially where an outbreak of small-pox has actually occurred.

Burgh Police and Health (Scotland) Bill.

The House went into Committee on this Bill. On the first clause, Dr. Clark moved to report progress, as no opportunity had been afforded for putting down amendments. He afterwards withdrew his motion, and the Bill was proceeded with.—On the motion of Dr. Cameron progress was reported, when Clause 340 was reached on the ground that succeeding clauses opened up debateable matters relating to public health and borrowing and rating powers.—The motion was agreed to.

Midwives' Registration.

On the motion of Mr. Fell Pease, the Select Committee on Midwives' Registration was nominated as follows: Mr. Bright, Mr. Tatton Egerton, Dr. Farquharson, Sir F. Fitz Wygram, Dr. Fox, Mr. Howorth, Sir Guyer Hunter, Mr. Fell Pease, Mr. Rathbone, Mr. Stephens, and Mr. Arthur Williams; five to be the quorum.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BLAKISTON, ARTHUR A., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Glastonbury.

BONE, JOHN W., M.B., C.M. Edin., has been appointed Senior House Surgeon to the Clayton Hospital and General Dispensary, Wakefield.

BOWDEN, REGINALD T., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Ramsgate Sanitary District of the Isle of Thanet Union.

BRISCOE, W. T., M.D., M.C. Dub., has been reappointed Medical Officer of Health to the Chippenham Town Council.

BROWN, JOHN L., M.B., C.M. Edin., has been appointed Medical Officer for the Ashburton Sanitary District of the Newton Abbot Union.

CLARK, JAMES, M.D. Aberd., L.R.C.S., F.R.C.S. Edin., has been reappointed Medical Officer of Health for Lichfield.

CONOLLY, C. H., M.R.C.S., has been reappointed Medical Officer of Health, Wood-green, N.

DUFFUS, GEORGE, M.B., C.M. Aberd., has been appointed Medical Superintendent of the Brook Villa Asylum, West Derby, Liverpool.

EAGER, T. CAWLEY, L.R.C.P., M.R.C.S., L.M., L.S.A., has been appointed Medical Officer to the Woking Post-office.

FIELD, F. A., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgeon to the Bedford General Infirmary and Fever Hospital.

FISHER, JOHN A., L.F.P.S. Glasg., L.R.C.P. Edin., has been reappointed Medical Officer of Health for Garston.

GIBBON, JOHN GEORGE, B.A., M.B., B.Ch. Univ. Dub., L.M. Rotunda Hosp., has been appointed Resident Medical Officer to Grey's Hospital, Maritzburg, Natal, S.A.

GOWING, B. C., M.R.C.S., has been reappointed Medical Officer of Health for the Penistone Urban Sanitary District.

GREENWOOD, WM., M.R.C.S., L.M. R.C.P. Irel., has been appointed Medical Officer for the Ossett Sanitary District of the Dewsbury Union.

GRIFFITH-WILLIAMS, WM. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Mattishall Sanitary District of the Milford and Launditch Union.

HAIGH, T. A., M.R.C.S., has been appointed Medical Officer of Health for Meltham.

HALL, WILLIAM, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Ince-in-Makerfield Urban Sanitary District of the Wigan Union, vice R. S. Hall, deceased.

HEMSTED, ARTHUR, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Walton-on-Thames and Oatlands Districts of the Chertsey Union, vice R. Reece, resigned.

KEMPE, C. M., M.R.C.S., has been reappointed Medical Officer of Health to the New Shoreham Port Sanitary Authority.

MARSH, FRANK, M.R.C.S., L.R.C.P. Lond., D.P.H. Camb., has been appointed Assistant Surgeon to the Birmingham and Midland Ear and Throat Hospital.

MILLETT, GEO. B., M.R.C.S., L.R.C.P. Edin., has been reappointed Medical Officer of Health for the Borough of Penzance.

NAYLOR, R. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Audlem Sanitary District of the Nantwich Union.

NICOLLS, JOHN M., M.B., C.M. Dub., has been reappointed Medical Officer of Health for St. Ives.

OPIE, EDWARD A., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the No. 2 B District of the East Preston Union.

PERCIVAL, THOS., M.R.C.S., has been appointed Medical Officer of Health for Knottingley and District.

REDWOOD, T. H., M.D. Durh., M.R.C.S., L.R.C.P., has been reappointed Medical Officer of Health for Rhymney.

REID, A. G., M.B., C.M. Edin., has been appointed House Surgeon to the Rotherham Hospital and Dispensary, vice Weatherbe.

RHODES, JAS., M.R.C.S., has been appointed Medical Officer of the Workhouse, Glossop Union.

ROBINSON, W. V., L.R.C.P. Lond., M.R.C.S., has been appointed a District Medical Officer of the Chertsey Union.

ROUTH, RANDOLPH H. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 2 Sanitary District of the Bridgwater Union.

ROWLAND, F. MORTIMER, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Assistant Medical Officer to the Workhouse Infirmary, Birmingham.

SCATLIFF, ARTHUR W., L.R.C.P., L.R.C.S. Edin., D.P.H. Lond., has been appointed Medical Officer of Health for the Margate Urban Sanitary District of the Isle of Thanet Union.

SCOTT, ARTHUR W., M.D. Brux., M.R.C.S., has been reappointed Medical Officer of Health for the Handsworth Urban Sanitary District.

SHAW, J. HEPWORTH, M.R.C.S., L.R.C.P. Lond., M.B., Ch.B. (Vict.), has been appointed Assistant Surgeon to the Liverpool South Dispensary, vice Dr. Molyneux, resigned.

TURNER, JOHN A., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Hinckley Rural Sanitary District.

TYNDALL, FRANCIS, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for West Houghton.

WALTON, F. F., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the East Sculcoates Sanitary District of the Sculcoates Union.

WATKINS, D. J. G., B.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Lincoln County Hospital.

WATSON, THOS., M.D. Glasg., C.M., has been reappointed Medical Officer of Health for the South Stockton Urban Sanitary District.

WELLBURN, EDGAR D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Sowerby Bridge.

WOLVERSON, THOS., L.R.C.P. Edin., M.R.C.S., has been appointed Surgeon to the Wolverhampton Police Force.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF LEICESTER.—Medical Officer of Health for the Borough. Total salary £500 per annum (£400 as Medical Officer of Health and Superintendent of Fever Hospital, and £100 as Public Analyst). (Apply to the Town Clerk, Town Hall, Leicester.)

CHARING-CROSS HOSPITAL, London.—Surgical Registrar. Salary £40 per annum.

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY.—Junior House Surgeon. Honorarium £25 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, BIRMINGHAM.—Honorary Physician.

KING'S COLLEGE, London.—Curator of the Museum.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £50 per annum, with board and residence. (Apply to the Secretary, Leith Offices, 34, Moorfields, Liverpool.)

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Qualified Dispenser (out-door).

LONDON SOCIETY FOR PROMOTING CHRISTIANITY AMONGST THE JEWS.—Fully qualified Medical Man, to labour amongst the Jews at the City of Safed, in Palestine. Salary £250 per annum, with unfurnished lodgings and travelling expenses out. (Apply to the Secretaries, 16, Lincoln's-inn-fields, W.C.)

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Resident Medical Officer for six months. Salary £50.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer for six months.

PLYMOUTH BOROUGH ASYLUM, Blackadon, Ivybridge, Devon.—Assistant Medical Officer. Salary £125 per annum, with quarters, board, and washing.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Anæsthetist and Registrar for one year. Honorarium of 20 guineas voted at the end of that term.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Visiting Physician for the Branch Hospital in the Royal Victoria and Albert Docks.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Visiting Ophthalmic Surgeon.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Anæsthetist. Honorarium £50 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BERRY.—On April 9th, at Wansford House, Watford, the wife of F. Haycraft Berry, M.D., of a daughter.

HERN.—On April 9th, at Semmercote, Darlington, the wife of John Hern, M.D. Ed., F.R.C.S.E., of a son.

INGLIS.—On April 3rd, at Montpellier Lawn, Cheltenham, the wife of Dr. Alexander Inglis, of Auchendinny and Redhall, Midlothian, of a daughter.

SIMPSON.—On April 8th, at Northumberland House, Finsbury-park, N., the wife of S. Simpson, M.B., Medical Superintendent, of a daughter.

MARRIAGES.

CALDECOTT—D'ARCY.—On April 9th, at Christ Church, Virginia Water, Charles Caldecott, M.B., B.S. Lond., M.R.C.S., of The Grove, Jersey, to Sophia, fourth daughter of the late Major Francis D'Arcy, of Drumkeeran House, Kesh, co. Fermanagh. (No cards.)

LICHFIELD—WELBY.—On Dec. 24th, 1891, at Umtali, Manica, South Central Africa, by the Rev. J. R. Sewell, B.A. Oxon., Clergyman in charge of Umtali, Diocese of Mashonaland, James Wm. Lichfield, L.R.C.P. Lond., &c., Surgeon British South Africa Co.'s Service, to Bertha (Sister Beryl), fourth daughter of William Welby, Esq., of Canterbury.

PASSMORE—RATCLIFF.—On April 11th, at West Haddon Church, by the Rev. W. H. Disney, Rector of Winwick, John E. S. Passmore, M.R.C.S., L.R.C.P., of Gainsborough, Lincolnshire, eldest son of the late Samuel Passmore, of North Molton, Devon, to Ada, only daughter of Thomas Ratcliff, of Fox Hill, West Haddon, Northamptonshire.

WAINWRIGHT—WALKER.—On April 6th, at St. Martin-in-the-Fields, Lennox Wainwright, M.D., M.R.C.S., L.R.C.P., Lond., L.S.A., of Folkestone, second son of William Wainwright, M.I.C.E., of Ashford, Kent, to Edith, elder daughter of the late Samuel Walker, of The Elms, Edmonton.

DEATHS.

IRVING.—On April 7th, at Park Gate, Blackburn, William Irving, M.D., J.P., in his 73rd year.

KINNEIR.—On April 1st, at Sherborne, Dorset, Richard Kinneir, M.D., formerly of Cirencester, Gloucestershire, aged 78.

MUSKETT.—On Feb. 12th, at Hope Town, South Africa, from congestion of the lungs, brought on by leaving his bed to see patients while suffering from influenza, Edward Burrell Muskett, M.D., M.C., in the 55th year of his age. Deeply regretted.

TRIPE.—On April 7th, at his residence, Richmond-road, John William Tripe, M.D., Medical Officer of Health for Hackney, aged 71.

TURNER.—On April 3rd, at his residence, St. Peter's-street, Tiverton, Devon, Samuel Warren Turner, L.M., M.B. Cantab., eldest son of Captain S. C. Turner, of Childe Okeford House, Dorsetshire.

WELLS.—On April 9th, at 7, Berkeley-place, Cheltenham, Warrick Walter Wells, F.R.C.S., Bengal Army (retired).

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, April 18.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, April 19.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, April 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 2.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

ROYAL METEOROLOGICAL SOCIETY (22, Great George-street, Westminster).—7 P.M. Mr. W. H. Dines: Anemometer Comparisons.—Mr. Francis Watts: The Harricane over the West Indies, August 18th-27th, 1891.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Mr. Robert Lawson: Cholera in Ships at Sea, and its Connexion with Manifestations of the same Disease on Land.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. E. Giltay: On the Use of the Camera Lucida in drawing Bacteria.—Mr. F. Chapman: Foraminifera of the Gault of Folkestone.—Surgeon P. W. Bassett-Smith: On some Deep-sea Deposits collected during the Voyage of H.M.S. *Penguin*, 1891.—Mr. W. M. Osmond: Simple Photo-micrographic Apparatus.

Thursday, April 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY.—Dr. Scanes Spicer: Hæmorrhage from the Upper Air Passages.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (Great Northern Central Hospital).—8.30 P.M. Clinical Evening.

Friday, April 22.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8 P.M. Living Specimens:—Dr. Percy Kidd: A case of Angioma of the Larynx.—Mr. J. R. Lunn: Neuritis following on Fractured Arm. 9 P.M. Papers:—Sir Dyce Duckworth: Sequel to a case of Myxœdema, with Post-mortem Examination.—Mr. Howard Marsh: A case of Spontaneous Cure of Two Aneurysms of the Femoral Artery apparently by Inflammatory Action.—Mr. Arbuthnot Lane: A case of very severe Hæmorrhage following Removal of the Tonsil; Ligature of the Common Carotid; Transfusion; Recovery.

Saturday, April 23.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 13th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 7	29·93	E.	52	47	107	66	45	—	Hazy
„ 8	29·97	N.E.	44	43	99	65	42	—	Overcast
„ 9	29·96	N.E.	49	46	100	67	43	..	Bright
„ 10	30·00	N.E.	56	50	110	67	43	..	Bright
„ 11	29·95	N.E.	45	41	103	67	39	..	Bright
„ 12	29·93	N.E.	41	39	92	52	38	..	Bright
„ 13	29·66	E.	39	38	67	40	38	..	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

COSTLY LIBEL OF A MEDICAL MAN BY A VENDOR OF PATENT MEDICINES.

MR. ALFRED ELLIS VAUGHAN of Haslington has set an excellent example of the right way of rebuking an impudent libel by a "quack." He had a club patient named Cooke with an abrasion of the finger. Cooke was anxious about his finger, and Mr. Vaughan promised to call in another practitioner. Thereupon Cooke went to Samuel Johnson, a vendor of quack medicines, who, according to the report of the trial for libel at the Chester Assizes, gave Cooke "a lotion which was neither good nor bad." The libel was contained in a testimonial published by Johnson, and purporting to have been written by Cooke. It set out that Cooke had been unsuccessfully treated, and added, "I must have died in two more days had not my friends advised me to escape and come to you at once. I did so." Mr. Johnson's powers are further set off in extracts from his pamphlet. "I cure the worst fever in three days certain, the worst inflammation in six hours certain, twist of the bowels in six hours certain," &c. It may be hoped that this benefactor of his race may have got a "twist" in the direction of greater honesty by the fine imposed for his libel on Mr. Vaughan in the form of damages £250.

W. H. M.—We doubt very much if the solicitor, who is merely agent of the client, is liable. The client certainly is responsible to our correspondent for his fees.

W. E. G.—It is a legal question. But we think, in the circumstances stated, B. ought to pay the balance.

EPISTAXIS.

To the Editors of THE LANCET.

SIRS,—In your issue of Feb. 6th of this year was a very excellent article by Dr. A. A. Philip on "Epistaxis: an Easy and Effectual Method of Plugging." The method he describes struck me as at once simple and much preferable to the ordinary mode of using Bellocq's cannula, inasmuch as it is quicker and easier to perform. I have lately had a case of epistaxis which resisted ordinary methods of treatment—viz., compressing the upper lip, application of ice externally and internally, syringing with tincture of hamamelis and cold water, syringing with hot water. I then resorted to Dr. Philip's method, using a piece of oiled silk, with the result that the bleeding stopped at once. The following day I removed the plug without the least difficulty or discomfort to the patient, and the bleeding has not returned since. I feel very grateful to Dr. Philip for his valuable suggestion.

I am, Sirs, yours very truly,

Bath, April, 1892. OTTO HOLST.

DEATH UNDER BROMIDE OF ETHYL.

DR. GLEICH reports a fatal result from the use of this anæsthetic. It occurred in Professor Billroth's clinique in March last, the patient being a man of forty-eight years of age, in hospital for extensive furunculus of the right arm. Before making the incision the operator had him anæsthetised with bromide of ethyl, but two minutes had barely elapsed when cyanosis appeared and pulse and breathing stopped. Artificial respiration was practised for an hour and a half but without the slightest effect. At the necropsy there was found degeneration of the myocardium and of the liver; the renal epithelium, moreover, was undergoing degenerative change. There was, however, little or nothing of the hyperæmia, which is an almost invariable phenomenon in death under chloroform. It seems difficult to tax the bromide of ethyl with the fatal result. In conditions similar to those of the patient in question no other narcotic could have been employed without imminent risk.

Mr. P. J. Thomson.—1. Dr. Radcliffe Crocker's book, "Diseases of the Skin," published by Mr. H. K. Lewis.—2. The best English Atlas at present is that of the New Sydenham Society, but it is as yet incomplete. Professor Neumann has lately published one in Vienna. We believe Mr. Y. J. Pentland is about to issue an atlas, to commence some time in the autumn of the present year.

Perplexed.—Our correspondent was not treated fairly or summoned formally. A medical man is only bound to attend when he receives a formal summons signed by the coroner. We should not advise him to do more than complain of the informality of the summons and the shortness of the notice.

MICROSCOPICAL WORK.

To the Editors of THE LANCET.

SIRS,—No doubt there are many men like myself working at the micro. cope, and endeavouring to keep our bacteriological knowledge up to date. The discussion at the Pathological Society on Phagocytosis furnished the most interesting series of papers that have been published for a long time. Now a great requisition is a gentleman who would undertake to examine any microscopical specimen sent "carriage paid" to him, with stamps to defray the cost of its return. No one would wish to occupy his time or for him to do it gratuitously, and if the necessary fees were not remitted, let him disregard the application. It would often be a great satisfaction to get a good microscopist to verify one's nomenclature, or say—"You have made a mistake; it is so-and-so; prepare the next specimen according to direction." I hope I am making a good suggestion; for I feel there is a great desideratum for such a gentleman, if he will come forward and volunteer his services. It would give an impetus to pathology and bacteriology throughout the country. I am, Sirs, yours faithfully,

April 11th, 1892. M.R.C.S.

THE DECIMAL SYSTEM.

THE New Decimal Association has just issued its second report, which gives a record of satisfactory progress in the work it has undertaken. The metric system is, as is well known, in use in Germany, France, Italy, Holland, Spain, Portugal, and many other countries, and it can, we think, be only a question of time for its manifold advantages to be practically recognised by all the nations of the world.

Omega, L.A.H., &c.—The treatment is at best unsatisfactory. Abstinence from alcoholic liquors should be strongly insisted on, and the bowels carefully regulated with saline purgatives and an occasional mercurial pill. Iodide of potassium would also probably prove useful. Should ascites occur, the fluid should be drawn off. But no single treatment can be suggested; such must necessarily be expectant.

Mr. Piggott (Clare).—Very shortly.

"PTYALISM."

To the Editors of THE LANCET.

SIRS,—I would advise "M.B., C.M." to give his patient chlorate of potassium in solution, in the proportion of an ounce to a pint of water—an ounce of the solution thrice daily before food. I published my experience of the remedy in cases of ptyalism and dry-mouth in the *Dublin Journal of Medical Science*, August, 1880. The medicine acts as a regulator in functional derangement of all conglomerate glands: in the case of ptyalism by reducing to normal limits the secreting power of the gland, and in cases of dry-mouth by exalting the physiological action when below par.—I am, Sirs, yours faithfully,

Belfast, April, 1892. ALEXANDER HARKIN, M.D., F.R.C.S.

To the Editors of THE LANCET.

SIRS,—Must we not consider the case given by your correspondent as one of chronic catarrh, similar to lachrymal catarrh or nasal catarrh, so frequently seen in old people? I have found the latter in connexion with a general weakness of circulation of the blood, and much improvement to result from a course of heart tonics, especially nux vomica.

I am, Sirs, yours faithfully,

April, 1891. M.R.C.S.

"POISONOUS CIGARETTES."

WE have received from various cigarette manufacturers samples of cigarettes the innocuousness of which does not appear to be suspected. If an opinion as to quality is required, they should be submitted of course to an analyst; but if there is reason to suppose that the practice of employing arsenic or other injurious materials in their manufacture is resorted to, then we should feel it our duty, in the interest of public health, to give the matter our serious attention. We have also received from one firm an interesting letter in which the writer is of opinion that harm frequently results from the use of unripe tobacco, or of tobacco containing an undue proportion of isatic, and from the ingredients used as flavouring agents, as well as from the practice of inhaling the smoke resorted to by some smokers. With the substance of these remarks we quite agree.

Dr. Edward Little.—"Natural premiums" (so-called) are calculated to increase with the age of the policy, and therefore to become very burdensome in course of time. This does not matter if a temporary assurance is all that is wanted; but that can be obtained more cheaply with the old-established offices than with these new comers in the insurance field. Comparisons such as are commonly made between "natural premium" policies and ordinary policies are apt to be very misleading, because the gradual growth and eventual burden of the natural premium are apt to be ignored and overlooked. Hence these schemes cannot be recommended in an ordinary case—the risks of present misunderstanding and subsequent disappointment are so great. Further than this, their best terms can always be bettered by the old companies. See the new Premium Table just issued by the London Life Association.

C.—It would not be in good taste. The professions are not to be confounded in one person.

SPRAY PRODUCERS WITH CHECK ACTION.

To the Editors of THE LANCET.

SIRS,—In your issue of April 9th, under the heading of "New Inventions," is an illustrated account of a "new" spray producer with check action, for applying medicaments to the larynx &c. I received from Berlin in the latter part of 1889 a similar instrument attached to a test-tube with foot-piece. Messrs. Weiss of Oxford-street in that year, at my suggestion, modified this instrument for me, the modification consisting of a screw arrangement, by which it can be attached to the neck of any bottle. They also at the same time made me a foot bellows to use with the above. This was in 1889; so I hardly think it can now be called a "new invention." I shall be much obliged if you will insert this in your next issue in justice to Messrs. Weiss, who were, I believe, the first makers of this ingenious device in London.

I am, Sirs, yours faithfully,

Devonshire-street, W., April 11th, 1892. W. R. H. STEWART.

*** Messrs. Weiss and Son send us a letter to the same effect as the above.—ED. L.

PUFFING OF MEDICAL MEN BY THE LAY PRESS.

WE extract the following from the *St. John's Wood, Kilburn, and Hampstead Advertiser*. Dr. Gaster is to be pitied for such an unseemly newspaper puff.

"Dr. A. Gaster has removed from 31, Warwick-road, Maida-hill, to 100, Abbey-road. This young rising physician was pupil of the famous professor, Dr. Babes, discoverer of the microbe of influenza, which has wrought such ravages in our midst of late. Dr. Gaster has contributed many original articles to different medical journals abroad, where he has taken his degree of M.D. with special honours, and subsequently passed as member of the Royal College of Physicians, London. He has held the appointment of house physician, house surgeon, and resident medical officer abroad; and house physician to the City of London Hospital. Dr. Gaster is the son of Chevalier A. E. Gaster, secretary to the Dutch Legation, and brother to the well-known Rev. Dr. Gaster, of Warwick-road, W."

Inquirer.—No qualification is required, but it must be borne in mind that all the responsibility lies with the principal.

CREMATION.

CREMATION is growing in popularity among the French. Last year 3741 bodies were cremated, and the second crematorium in the Père Lachaise cemetery had to be enlarged. Italy has twenty-two crematoria, among them several perambulating ones. In Germany three new ones were opened in 1891. In other countries also the practice is becoming popular.

R. P. W. will find the information in our Students' Number, published in September last.

Dr. A. H. Smith (New York).—The paper will appear in an early number.

THE PERILS OF DEATH CERTIFICATION IN SPAIN.

FROM a case which has just been published in *La Independencia Médica* it would appear that a Spanish medical man practising in Tarragona was sent for to a poor cottage some two hours distant, to see a man who said he had had a chill, with pain in the side and headache, and who seemed so weak that he could not raise himself in bed. The temperature and pulse were normal, and nothing was discovered by auscultation and percussion. The tongue was dry and dark. The patient seemed very despondent about himself, though the doctor did his best to reassure him by telling him that there was no cause for anxiety. In the evening the wife called on the doctor, telling him that her husband had become worse, and begging that he might be visited as early as possible next day. The doctor was surprised at this intelligence, and was still more astonished when, just as he was starting to pay the required visit the next morning, a messenger arrived, saying that the man was dead. The only conclusion he could come to was that some unsuspected complication had arisen which had rapidly carried the patient off; and when he was asked to fill up the death certificate later in the day he mentioned to the person who came for it his surprise at the patient's death. It was ultimately discovered that the whole case was an attempt to defraud an assurance company of 40,000 francs, the coffin when it was exhumed containing only a bag of earth and some faeces, which were employed for the purpose of preventing the neighbours from viewing the body, which was said to have burst and to be most offensive. The guilty parties were punished, and the doctor, who was found by the court to have given a false certificate "with rash imprudence," was fined 125 francs, and was ordered to pay costs amounting to a much larger sum. Fortunately for him, the assurance company testified its gratitude for the very important aid he had given it in resisting the claim by indemnifying him from all pecuniary loss. In the absence of any evidence as to the details of the cause of death given in the certificate we can hardly express an opinion as to whether the medical practitioner was deserving of sympathy. We are inclined to think that, under such circumstances as those narrated above, an English medical man would undoubtedly refuse to certify

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Messrs. Allen and Hanburys, London; Dr. Anningson, Cambridge; Mr. Appleyard, Bradford; Commander Blount, R.N., Chelsea; Messrs. Burroughs and Wellcome, London; Dr. Brogden, Cardiff; Mr. Barford, Wokingham; Mr. T. Bond, London; Dr. Collie, London; Mr. Collins, Birmingham; Mr. Claxton, Bournemouth; Mr. Cameron, Strathpeffer, Spa, N.B.; Mr. Cohen, London; Dr. Dutil, Paris; Messrs. Davies and Co., London; Mr. Duffin, Liverpool; Dr. W. Duncan, London; Messrs. Earnshaw and Co.; Mr. Frost, London; Mr. Galloway, Glasgow; Mr. Gilchrist, Inverskip; Dr. F. Hewitt, London; Dr. W. H. Harris, Maidstone; Messrs. Humphreys, Knightsbridge; Mr. Hall, London; Dr. Hellier, Leeds; Dr. Hughes, Denbigh; Dr. Harkin, Belfast; Mr. Holst, Bath; Mr. Kelly, London; Messrs. Krohne and Sesemann, London; Dr. Knott, Middlesbrough; Dr. J. Kerr, Bradford; Mr. Keyworth, Lincoln; Messrs. E. and S. Livingstone, Edinburgh; Messrs. Lloyd and Co., Leicester; Dr. Ed. Little, Wimbledon; Mr. Martin, Blackburn; Mr. Jas. MacMunn, London; Dr. J. Macpherson, Larbert; Mr. W. E. Miles; Mr. Howard Marsh, London; Mr. Nock, London; Mr. North, Birmingham; Dr. J. Oliver, London; Captain Persico, London; Mr. R. J. Pitt; Mr. Powers, Tamworth; Mr. Prior, London; Mr. Pollard, Wakefield; Mr. Rice, Cheshire; Messrs. Richardson and Co., Liverpool; Messrs. Rowntree and Co., York; Messrs. Robertson and Scott, Edinburgh; Mr. T. M. Stone, Wimbledon; Mr. Southam, Manchester; Messrs. S. Smith and Co., Bow; Dr. G. Steell, Manchester; Messrs. Swinburne and Son; Mr. W. R. H. Stewart, London; Mr. Siegle, London; Dr. A. H. Smith, New York; Mr. B. Thornton, Margate; Mr. Fry, Chipping Norton; Mr. Tomkins, Leicester; Mr. Thacker, Ohio; Dr. Thomas, Carmarthenshire; Mr. E. W. Taylor, London; Mr. Vickers, London; Mr. Westmorland, Manchester; Mr. Wilks, Worthing; Mr. Roger Williams, Preston; Mr. Wilkinson, Nottingham; Messrs. J. Wright and Co., Bristol; Messrs. White, Druce, and Brown, London; A Constant Reader; C.; F. M. D.; M.R.C.S.; Omega; Good Health Publishing Co., Michigan, U.S.A.; Medico, Liverpool; Fides; *Surrey Comet* Office, Kingston-on-Thames; Massage, London; A. B. C.; Town Clerk, Leicester; Clerical &c. Agency, Manchester; Secretary, Royal Hospital, Salford; Medicus, London; Y.; Perplexed; K. T. M., Torquay; Euonymin, London; B. R. K. J., London; Secretary, School of Medicine, Sheffield.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Watt, Workington; Mr. Robinson, Folkestone; Messrs. Brown, Gould, and Co., London; Mr. Robinson, Sheffield; Mr. McKettrick, Virginia Water; Mr. Norman, Dawlish; Mr. Jackson, Wisbech; Messrs. Keith and Co., Edinburgh; Mr. Brice, Bridgwater; Messrs. Whitworth and Stewart, Manchester; Dr. Whitham, Manchester; Dr. Davies, Ebbw Vale; Mr. Thin, Edinburgh; Mr. Fiske, Cambridge; Messrs. Benger and Co., Manchester; Mr. Patterson, Durham; Mr. Nicholls, Bury St. Edmunds; Mrs. Tyte, Minchinhampton; Mr. Mainwaring, West Kensington; Dr. A. Davis, London; Mrs. Muskett, Cape Town, South Africa; Miss Candy, Brixton; Mr. Dyer, Hants; Messrs. Thompson and Sons, St. Leonards; Mr. Walker, Stirlingshire; Mr. Werner, Gold Coast Colony; Dr. Waterhouse, Rotherham; Mr. Pryce, Sidmouth; Mr. Anderson, Carmarthen; Mr. Foxley, Barnsley; Mr. Hornibrook, Bloomsbury; Mr. Chantrell, Birkenhead; Mr. Edwards, Birmingham; Dr. Richardson, London; Rev. Mr. Day, Norwich; Mr. Taylor, Peterborough; Mr. Rickeard, Newcastle-on-Tyne; Dr. Adams, West Malling; Mr. Jones, Bridgend; Dr. Jessett, London; Dr. Wilding, Hendley; Mr. Ling, Keighley; Mr. Ellis, Harrow; Mr. Macara, Glasgow; Mr. Stilliard, Birmingham; Mr. Palmer, Brighton; Mr. Howe, Bromsgrove; Dr. Gorham, Garstang; Mr. Coxon, London; Mr. Hern, Darlington; M. L., Edinburgh; Janion, London; N., London; D. P. S., London; Asmodeus, London; J. W. P., London; Warneford Asylum, Oxford; Matron, Southampton; Secretary, Cheltenham Hospital; Surgeon, Rochford; T. H., Manchester; Joyce, Rhondda Valley; Chemist, Chester; Midlands, London; M., London; Class Rooms, Edinburgh; Surgeon-Major, London; Secretary, Rotherham Hospital; C., Bristol; A. B. C., London; J. A. T., Middlesbrough-on-Tees; Wigan, London; Wales, London; B.A., London; G. G., London; Beta, London; Strophánthus, London.

NEWSPAPERS.—*Liverpool Courier, Leeds Mercury, Leicester Daily Post, Public Health, Nottingham Evening News, Sussex Daily News, Manchester Guardian, Cleveland Leader (New York), Toronto Globe, Melbourne Argus, Cape Times, North British Daily Mail, Western Daily Mercury, Sydney Morning Herald, Scottish Leader, Law Journal, Freeman's Journal, Belfast News Letter, Scotsman, Bristol Mercury, Yorkshire Post, Newcastle Daily Leader, Hertfordshire Mercury, Windsor and Eton Gazette, Mining Journal, Reading Mercury, Liverpool Daily Post, Weekly Free Press and Aberdeen Herald, Dundee Advertiser, City Press, Local Government Chronicle, The News, Builder, Windsor and Eton Express, Sun (New York), Surrey Advertiser, Home News, Sunday Times, Society, Architect, Temperance Record, Local Government Journal, West Middlesex Advertiser, Horticultural Times, Le Temps (Paris), Chester Courant, Hobart Mercury, Eastern Daily Press, Richmond Herald, Rangoon Times, New Zealand Herald, West Middlesex Standard, Citizen, Bradford Observer, South Wales Daily News, Eastern Daily Press, &c.*, have been received.

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Half a Page		2	15 0
An Entire Page		5	5 0

The Publisher cannot hold himself responsible for the return of testimonials &c. sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Office letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.